Pioneer

Service Manual

PION -05732

ORDER NO.
RRV2203

AUDIO/VIDEO MULTI-CHANNEL AMPLIFIER

VSA-E07

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	VSA-E07		
HY	○	AC220-230V	AC240V, *
HV	○	AC230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
VSX-908RDS-G/HY	RRV2166	

CONTENTS

1. CONTRAST OF MISCELLANEOUS PARTS ········ 2
2. PCB CONNECTION DIAGRAM ···························· 9
3. SCHEMATIC DIAGRAM ·· 10
4. REMOTE CONTROL UNIT ································ 20

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

©PIONEER CORPORATION 1999

T – ZZK SEPT. 1999 I

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on product are used for disassembly.*
● *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 → 56 x 10^1 → 561 .... RD1/4PU$\boxed{5}\boxed{6}\boxed{1}$J
47k → 47 x 10^3 → 473 .... RD1/4PU$\boxed{4}\boxed{7}\boxed{3}$J
0.5 → R50 .... RN2H$\boxed{R}\boxed{5}\boxed{0}$K
1 → 1R0 .... RS1P$\boxed{1}\boxed{R}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k → 562 x 10^1 → 5621 .... RN1/4PC$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

■ CONTRAST TABLE

VSA-E07/HY, HV and VSX-908RDS-G/HY are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No.			Remarks
			VSX-908RDS-G /HY	VSA-E07 /HY	VSA-E07 /HV	
		PCB ASSEMBLIES				
	NSP	MAIN ASSY	AWK7528	AWK7508	AWK7508	
P5- 5		├ MAIN CONTROL ASSY	AWX7410	AWX7340	AWX7340	
P5-12		├ VIDEO ASSY	AWX7422	AWX7419	AWX7419	
P5-13		├ S-VIDEO ASSY	AWX7395	AWX7308	AWX7308	
P5-16		└ DIGITAL-I/O ASSY	AWX7396	AWX7315	AWX7315	
	NSP	COMPLEX ASSY	AWK7529	AWK7509	AWK7556	
P5- 2		├ EXTERNAL IN (EXTRA-5.1) ASSY	AWX7413	AWX7348	AWX7348	
P5- 3		├ A-PINJACK ASSY	AWX7412	AWX7346	AWX7346	
P5- 4		├ CONNECTION ASSY	AWX7347	AWX7558	AWX7558	
P5- 9		├ REGULATOR ASSY	AWX7310	AWX7559	AWX7559	
P5-11		├ TRANS 2-2 ASSY	AWX7518	AWX7470	AWX7470	
P5-15		└ PRIMARY ASSY	AWX7345	AWX7345	AWX7454	
	NSP	FRONT/VAMP ASSY	AWK7530	AWK7511	AWK7511	
P5-19		├ V-AMP ASSY	AWX7309	AWX7514	AWX7514	
P8- 2		├ DISPLAY ASSY	AWX7414	AWX7361	AWX7361	
P8- 3	NSP	├ ROTARY ENCODER ASSY	AWX7405	AWX7328	AWX7328	
		└ VOLUME ASSY	Not used	AWX7367	AWX7367	No. 1
		PACKING SECTION				
P3- 1		AM Loop Antenna	ATB7009	Not used	Not used	
P3- 2		FM Wire Antenna	ADH7010	Not used	Not used	
P3- 3		Operating Instructions (English)	ARB7187	ARB7189	ARB7189	
P3- 4		Remote Control Unit (CU-VSX165)	AXD7236	Not used	Not used	
P3- 4		Remote Control Unit (CU-VSA032)	Not used	AXD7217 *1	AXD7217 *1	
P3- 9		Packing Case	AHD7815	AHD7813	AHD7813	
P3-14		Operating Instructions (German)	ARC7244	ARC7271	Not used	
P3-15		Operating Instructions (French)	ARC7245	ARC7247	Not used	
P3-16		Operating Instructions (Italian)	ARC7246	ARC7248	Not used	
P3-17		Operating Instructions (Dutch)	ARC7270	ARC7249	Not used	
P3-18		Operating Instructions (Swedish)	ARC7280	ARC7283	Not used	
P3-19		Operating Instructions (Spanish)	ARC7281	ARC7284	Not used	
P3-20		Operating Instructions (Portuguese)	ARC7282	ARC7285	Not used	
		Remo-con. Cushion	Not used	AXG7080	AXG7080	Accessories

*1 : Refer to "4. REMOTE CONTROL UNIT".

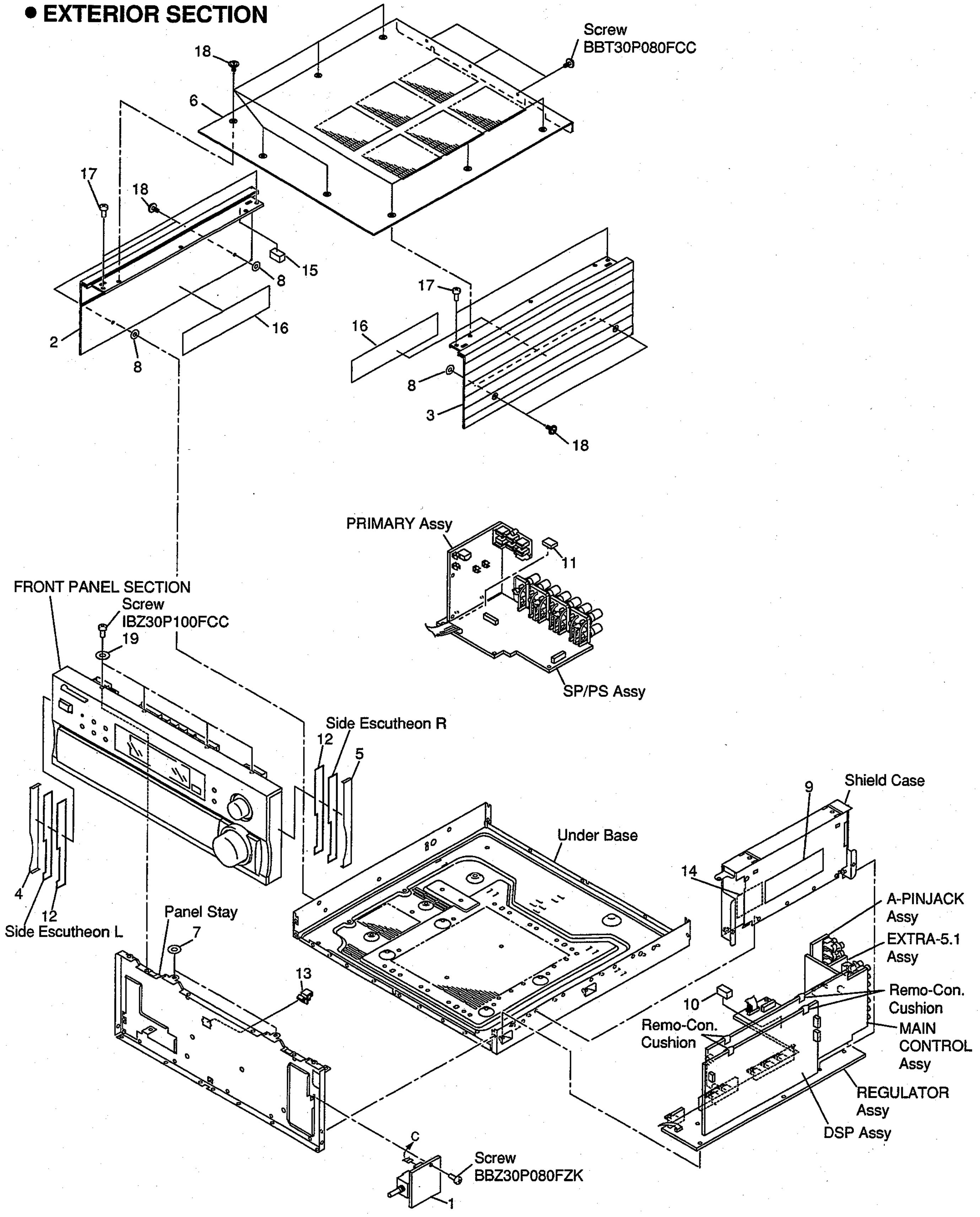
Ref. No.	Mark	Symbol and Description	Part No.			Remarks
			VSX-908RDS-G /HY	VSA-E07 /HY	VSA-E07 /HV	
		EXTERIOR SECTION				
P5-20	⚠	AC Power Cord	ADG7029	ADG7029	VDG1063	
P5-22		FM/AM TUNER Unit	AXX7048	Not used	Not used	
P5-26		AC Cord Spacer	ANG1153	ANG1153	Not used	
P5-26		Cord Stopper	Not used	Not used	CM-22B	
P5-27		Bonnet Case	AZN7809	Not used	Not used	
P5-31		Lead Card 13P AD (J16)	ADD7169	Not used	Not used	
P5-37		Assy Holder	ANG7121	ANG7139	ANG7139	
P5-39		Card Spacer	AEC7133	Not used	Not used	
P5-43	NSP	Frame	ANG7238	ANG7243	ANG7243	
P5-48	NSP	Panel Stay	AND7031	AND7032	AND7032	
P5-54		Rear Panel	ANC7866	ANC7771	ANC7819	
P5-55		Shield Case	ANK7054	ANK7055	ANK7055	
P5-58		Side Escutheon L	AAK7662	AAK7639	AAK7639	
P5-59		Side Escutheon R	AAK7663	AAK7640	AAK7640	
P5-64	NSP	Under Base	ANA7089	ANA7091	ANA7091	
P5-72		Screw	BBT30P100FCC	IBZ30P100FCC	IBZ30P100FCC	
P5-73		Screw	FBT40P080FNI	Not used	Not used	
P5-78	⚠	AC Socket 3P	AKP-502	AKP-502	Not used	
P5-79		Caution Label	ARW7036	ARW7036	Not used	
P5-80		Fuse Holder	Not used	Not used	VKR1003	
P5-81	⚠	Fuse (T5A)	Not used	Not used	PEK1003	
P5-83	NSP	Spacer	AEB1254	Not used	Not used	
		Side Panel L D10	Not used	AAH7021	AAH7021	No. 2
		Side Panel R D10	Not used	AAH7022	AAH7022	No. 3
		Side Plate L D10	Not used	AAH7048	AAH7048	No. 4
		Side Plate R D10	Not used	AAH7049	AAH7049	No. 5
		Top Plate Assy E07	Not used	AAH7062	AAH7062	No. 6
		Washer T	Not used	ABE7005	ABE7005	No. 7
		Washer S	Not used	ABE7006	ABE7006	No. 8
		S.Cushion	Not used	AEB7178	AEB7178	No. 9
		Spacer V	Not used	AEB7179	AEB7179	No. 10
		Spacer P	Not used	AEB7180	AEB7180	No. 11
		Side Sheet D10	Not used	AEC7230	AEC7230	No. 12
	NSP	PC Support	Not used	AEC7237	AEC7237	No. 13
		Sheet	Not used	AED7035	AED7035	No. 14
		Rubber	Not used	AEZ7002	AEZ7002	No. 15
	NSP	Side Panel Sheet	Not used	AMR7284	AMR7284	No. 16
		Screw	Not used	BBT30P060FZK	BBT30P060FZK	No. 17
		SH Screw	Not used	PBA1049	PBA1049	No. 18
		Washer	Not used	VEC1254	VEC1254	No. 19
		HEAT SINK SECTION				
P7- 9	NSP	Heat Sink	ANH7102	ANH7103	ANH7103	
		FRONT PANEL SECTION				
P8-10		Door Sheet	AAH7057	AAH7050	AAH7050	
P8-14		MR Button	AAD7575	Not used	Not used	
P8-21		Sub Panel	ANB7207	ANB7163	ANB7163	
P8-25		Front Panel	ANB7176	ANB7219	ANB7219	
P8-30		Volume Knob	AAB7210	AAB7211	AAB7211	
P8-38		Panel Base	AMB7572	AMB7573	AMB7573	
		Function Lens	Not used	AAK7628	AAK7628	No. 20
		Lead Card 8P AD (J19)	Not used	ADD7168	ADD7168	No. 21

Notes : •The numbers in the remarks column correspond to the numbers on the " EXPLODED VIEWS ".

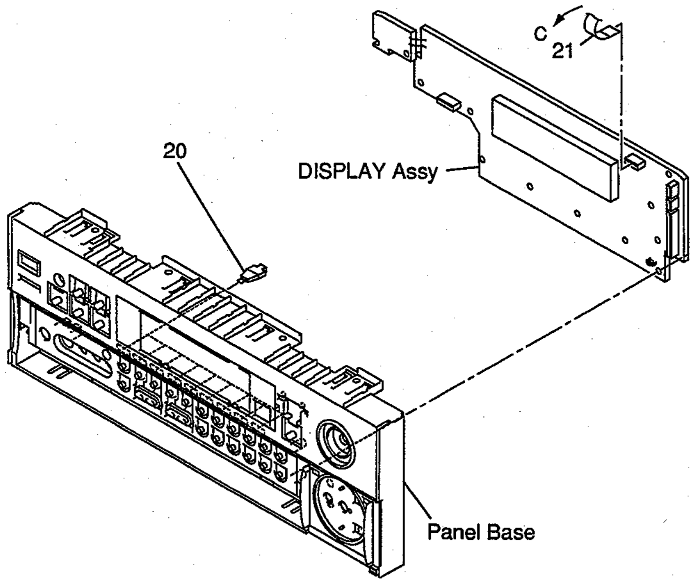
- For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES", "2. PCB CONNECTION DIAGRAM" and "3. SCHEMATIC DIAGRAM".

■ EXPLODED VIEWS

● EXTERIOR SECTION


Screw
BBT30P080FCC
18
6
17
18
15
8
16
2
8
17
16
8
3
18
PRIMARY Assy
11
FRONT PANEL SECTION
Screw
IBZ30P100FCC
19
SP/PS Assy
Side Escutheon R
12
5
Shield Case
9
Under Base
14
4
12
Side Escutheon L
Panel Stay
7
13
A-PINJACK Assy
EXTRA-5.1 Assy
Remo-Con. Cushion
10
Remo-Con. Cushion
MAIN CONTROL Assy
REGULATOR Assy
DSP Assy
C
Screw
BBZ30P080FZK
1

• FRONT PANEL SECTION



■ CONTRAST OF PCB ASSEMBLIES

A F EXTERNAL IN (EXTRA-5.1) ASSY

AWX7348 and AWX7413 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7413	AWX7348	
	JA1101–JA1103 2P PIN JACK	AKB7095	AKB7121	

B F A-PINJACK ASSY

AWX7346 and AWX7412 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7412	AWX7346	
	JA1011–JA1013 4P PIN JACK	AKB7048	AKB7108	
	JA1015 4P PIN JACK	AKB7048	Not used	
	1016 2P PIN JACK	AKB7210	Not used	
	CN1014 6P PIN JACK (For JA1015 and 1016)	Not used	AKB7119	

C F CONNECTION ASSY

AWX7558 and AWX7347 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7347	AWX7558	
	IC1301–IC1303	NJM4558D-D	UPC4570C	

E F V-AMP ASSY

AWX7514 and AWX7309 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7309	AWX7514	
	C513, C533, C553, C613, C633	CEAT470M50	CECA470M50	
	C7507, C7508, C7527, C7528	Not used	CEAT1R0M50	

DF MAIN CONTROL ASSY

AWX7340 and AWX7410 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7410	AWX7340	
	IC103, IC105	NJM4558MD	UPC4570G2	
	Q991	2SC1740S	Not used	
	Q992	2SC2412K	Not used	
	D991	1SS355	Not used	
	D995	UDZ11B	Not used	
	C109, C110	Not used	CCSQCH221J50	
	C991	CEAT101M16	Not used	
	C992	CKSQYF225Z16	Not used	
	C995	CKSQYB103K50	Not used	
	R143, R144	Not used	RS1/10S331J	
	R921	RS1/10S103J	Not used	
	R922	Not used	RS1/10S103J	
	R975, R976, R978, R980–R983	RS1/10S102J	Not used	
	R991	RS1/10S471J	Not used	
	R992	RS1/10S221J	Not used	
	R993	RS1/10S101J	Not used	
	R994	RS1/10S472J	Not used	
	R996	RS1/10S0R0J	Not used	
	CN902 13P FFC CONNECTOR	52044-1345	Not used	
	CN941 4P PIN JACK	AKB7015	Not used	
	JA911 2P PIN JACK	DKB1045	Not used	
	113 6P PIN JACK	AKB7089	Not used	
	JA901, JA911 4P PIN JACK	Not used	AKB7075	
	103 6P PIN JACK (For 113)	Not used	AKB7088	
NSP	J101	Not used	DB916NS0	
	J102	Not used	DB216NS0	

MF REGULATOR ASSY

AWX7559 and AWX7310 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7310	AWX7559	
⚠	IC5003	NJM78M12FA	Not used	
⚠	D5009	D3SBA20(B)	LN4SB60-4003	
	C5007	CEAT472M16	CEAT103M16	
	C5012	CKCYF103Z50	Not used	
	C5013	CEAT101M25	Not used	
	C5019, C5021, C5023	CEAT101M10	CEAT221M10	
	C5029	Not used	CEAT221M50	
	C5030 (1µF/100V)	Not used	ACH1237	

OF TRANS 2-2 ASSY

AWX7470 and AWX7518 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7518	AWX7470	
⚠	IC5501	AEK7018 (4A)	AEK7019 (5A)	
⚠	C5501	CEANPR47M50	ACH1237 (1µF/100V)	
⚠	R5501	RFA1/4PS100J	RFA1/4PS220J	
	R5502	RD1/4PU104J	Not used	

P F VIDEO ASSY

AWX7419 and AWX7422 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7422	AWX7419	
	702, 705 2P RCA PIN JACK	AKB7017	AKB7076	
	706 2P RCA PIN JACK	AKB7017	Not used	
	707 1P RCA PIN JACK	AKB7020	Not used	
	JA701 3P PIN JACK (For 706 and 707)	Not used	AKB7109	

Q F S-VIDEO ASSY

AWX7308 and AWX7395 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7395	AWX7308	
	CN801 4P MINI DIN SOCKET	AKP7043	Not used	
	CN802, CN803 4P MINI DIN SOCKET	AKP7020	AKP7023	
	JA801 4P MINI DIN SOCKET (For CN801)	Not used	AKP7049	

S F DISPLAY ASSY

AWX7361 and AWX7414 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7414	AWX7361	
	IC7071	Not used	M66311FP	
	IC7401	BU1923	Not used	
	Q7002	DTC124EK	Not used	
	Q7401	2SA1993	Not used	
	Q7402	DTC143ES	Not used	
	Q7403	2SC1740S	Not used	
	D7002	SLR-343VR	Not used	
	D7071–D7079	Not used	SLR-343VR(MNP)	
	L7401	LFA2R2J	Not used	
	S7022, S7024–S7028, S7030	VSG1009	Not used	
	C7011, C7073, C7074	Not used	CKSQYB102K50	
	C7071	Not used	CEAL101M6R3	
	C7072	Not used	CKSQYB473K50	
	C7401	CKSQYB472K50	Not used	
	C7402	CEAT2R2M50	Not used	
	C7091, C7403, C7404	CKSQYB102K50	Not used	
	C7405	CEAT101M10	Not used	
	C7406, C7407	CCSQCH270J50	Not used	
	C7408	CKSQYB561K50	Not used	
	C7409	CEAT1R0M50	Not used	
	R7038	RS1/10S271J	Not used	
	R7047, R7048	RS1/10S223J	Not used	
	R7071–R7079	Not used	RS1/10S271J	
	R7080–R7083	Not used	RS1/10S102J	
	R7092	Not used	RS1/10S473J	
	R7401, S7407, S7408	RS1/10S102J	Not used	
	R7403	RS1/10S222J	Not used	
	R7404	RS1/10S473J	Not used	
	R7405	RS1/10S333J	Not used	
	R7406	RS1/10S104J	Not used	
	CN7003	Not used	52045-0845	
	X7401 CRYSTAL RESONATOR (4.332MHz)	ASS7004	Not used	
	PCB BINDER	Not used	VEF1040	

TF ROTARY ENCODER ASSY

AWX7328 and AWX7405 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7405	AWX7328	
	C7103, C7104	CKSQYB103K50	Not used	
	R7103, R7104	RS1/10S103J	Not used	
	S7101	ASX7004	Not used	

VF PRIMARY ASSY

AWX7454 and AWX7345 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7345	AWX7454	
	Y6003 AWG18 BOARD IN	ADX7321	Not used	
	Y6004 AWG18 BOARD IN	ADX7320	Not used	
	Y6005 AWG18 BOARD IN	ADX7319	Not used	

WF DIGITAL I/O ASSY

AWX7315 and AWX7396 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7396	AWX7315	
	JA1204 2P PIN JACK	AKB7095	AKB7121	

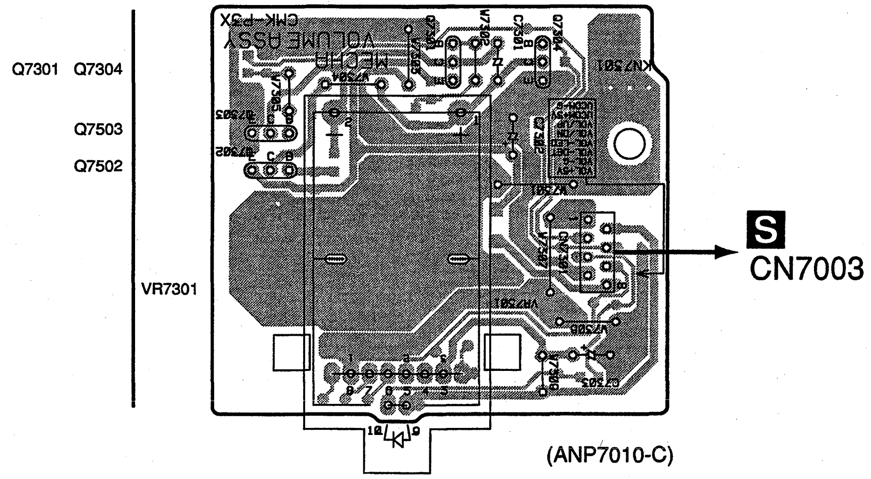
■ PCB PARTS LIST

Mark	No.	Description	Part No.
	ZF VOLUME ASSY		
	SEMICONDUCTORS		
	Q7301, Q7302		2SA1993
	Q7303, Q7304		2SC5395
	D7301		1SR154-400
	CAPACITORS		
	C7301		CEANP100M16
	C7302		CEAT220M50
	C7303		CEAT471M6R3
	RESISTORS		
	VR7301	(VARIABLE WITH MOTOR)	ACX7037
	Other Resistors		RS1/10S□□□J
	OTHERS		
	CN7301	8P FFC CONNECTOR	52045-0845
	KN7301	EARTH METAL FITTING	VNF1084

2. PCB CONNECTION DIAGRAM

2.1 VOLUME ASSY

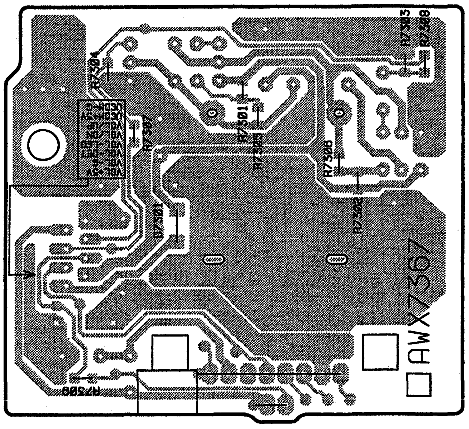
ZF VOLUME ASSY


Q7301
Q7304
Q7503
Q7502
VR7301
S
CN7003
CMK-P3X
VOLUME ASSY
MECHA
KN7501

(ANP7010-C)

SIDE A

ZF VOLUME ASSY


R7304
R7307
R7301
R7305
R7303
R7308
R7500
R7502
D7301
AWX7367

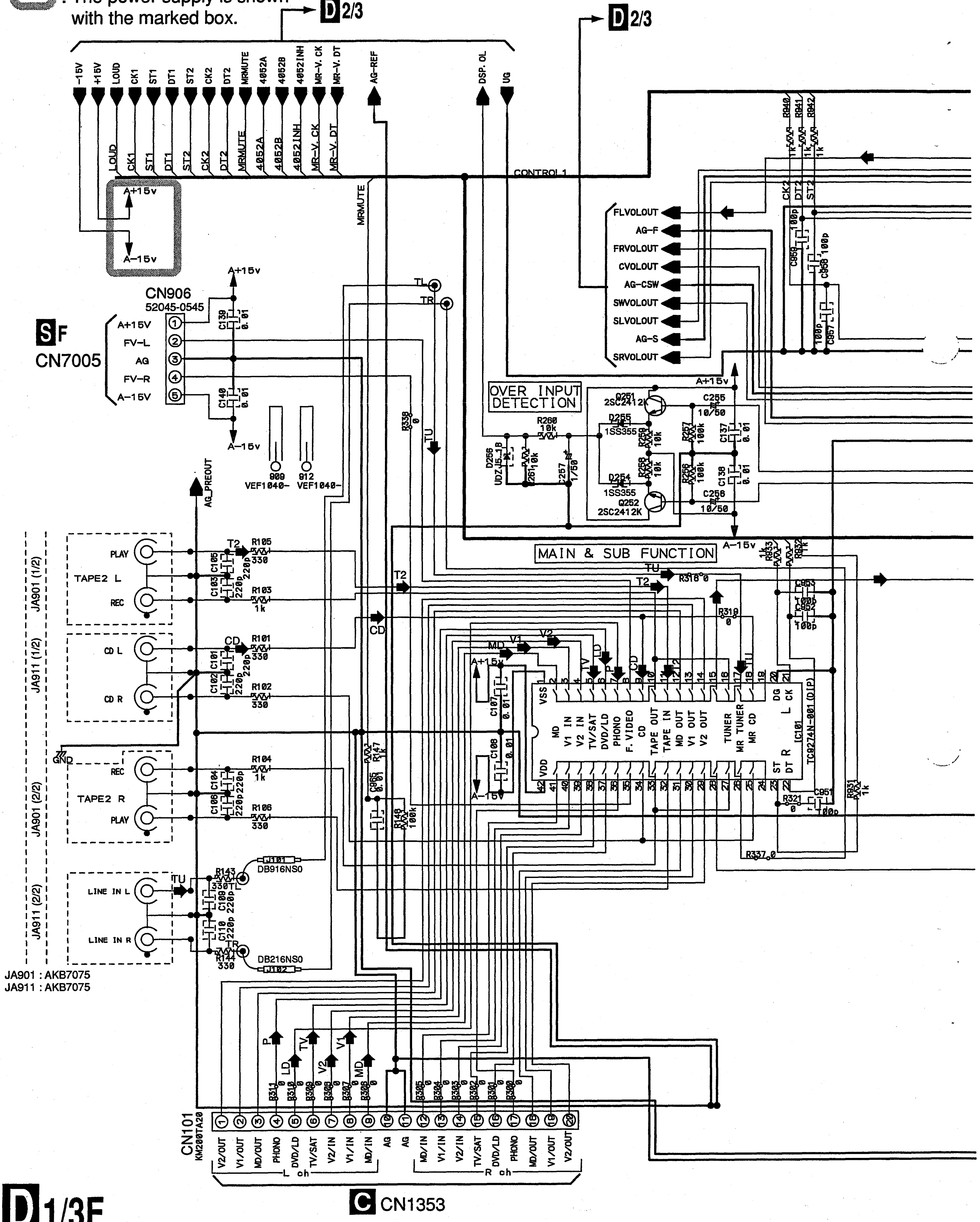
(ANP7010-C)

SIDE B

3. SCHEMATIC DIAGRAM

3.1 MAIN CONTROL ASSY (1/3)

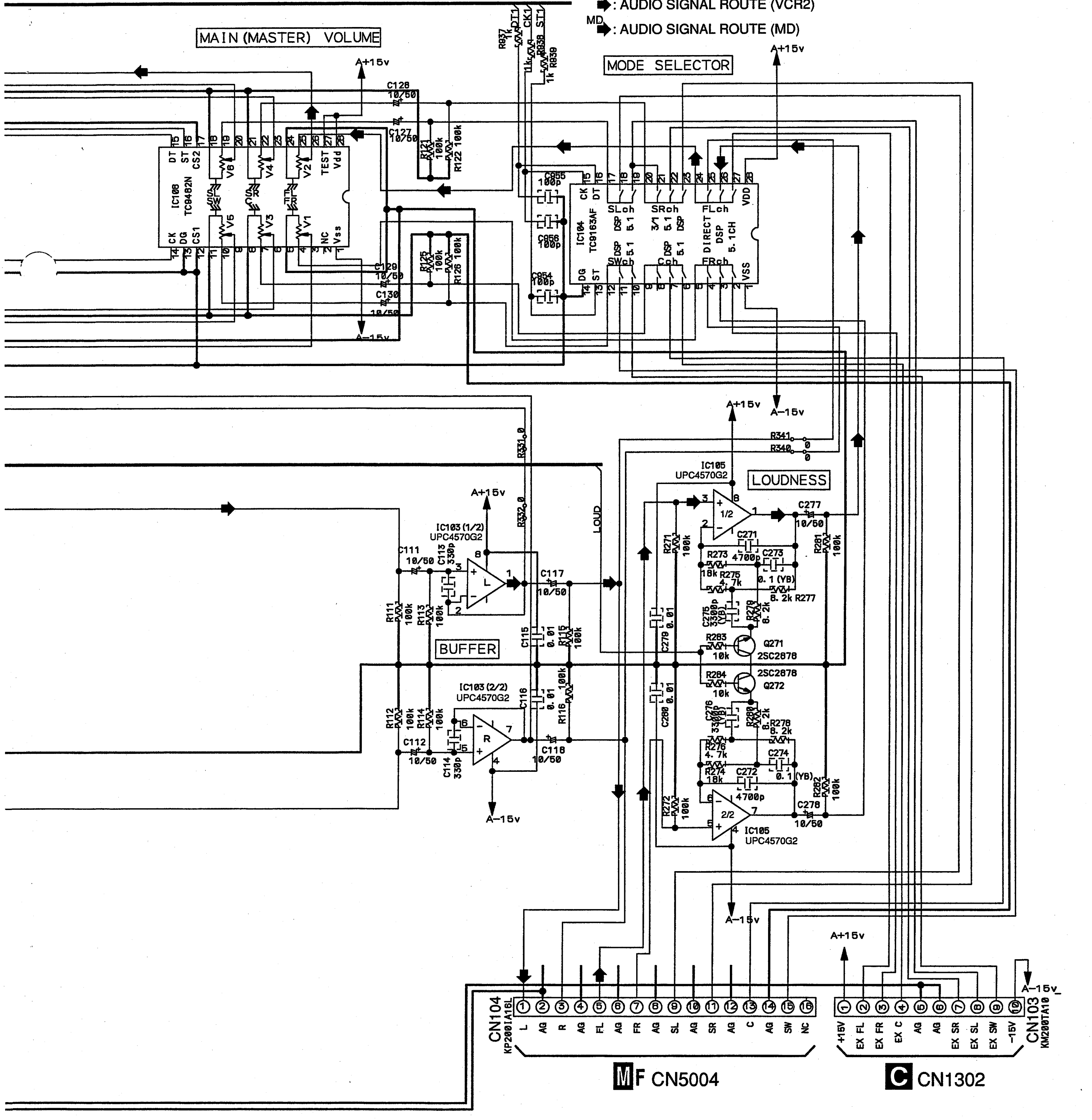
: The power supply is shown with the marked box.


D 2/3
D 2/3
-15V
+15V
LOUD
CK1
ST1
DT1
ST2
CK2
DT2
MRMUTE
4052A
4052B
4052INH
MR-V. CK
MR-V. DT
AG-REF
DSP. OL
UG
CONTROL 1
A+15v
A–15v
MRMUTE
R940
R941
R942
1k
CK2
DT2
ST2
FLVOLOUT
AG-F
FRVOLOUT
CVOLOUT
AG-CSW
SWVOLOUT
SLVOLOUT
AG-S
SRVOLOUT
C959 100p
C958 100p
C957 100p
TL
TR
CN906
52045-0545
S F
CN7005
A+15V
FV-L
AG
FV-R
A–15V
C139 0.01
C140 0.01
A–15v
909 VEF1040-
912 VEF1040-
R338 0
TU
OVER INPUT DETECTION
Q251 2SC2412K
D255 1SS355
R260 10k
D256 UDZJ5.1B
R261 10k
C257 1/50
R259 10k
R258 10k
D254 1SS355
Q252 2SC2412K
R257 100k
R256 100k
C137 0.01
C138 0.01
C255 10/50
C256 10/50
A+15v
A–15v
AG_PREOUT
MAIN & SUB FUNCTION
R933 1k
R932 1k
TU
R318 0
T2
C953
C952 100p
R319 0
JA901 (1/2)
TAPE2 L
PLAY
REC
T2
C105 220p
C103 220p
R105 330
R103 1k
JA911 (1/2)
CD L
CD R
CD
C101 220p
C102 220p
R101 330
R102 330
MD
V1
V2
LD
P
CD
TV
A+15v
C107 0.01
C108 0.01
A–15v
VSS
VDD
MD
V1 IN
V2 IN
TV/SAT
DVD/LD
PHONO
F.VIDEO
CD
TAPE OUT
TAPE IN
MD OUT
V1 OUT
V2 OUT
TUNER
MR TUNER
MR CD
DG
CK
L
R
ST
DT
IC101
TC9274N-001 (DIP)
R321 0
C951 100p
R931 1k
R337 0
GND
JA901 (2/2)
TAPE2 R
REC
PLAY
C104 220p
C106 220p
R104 1k
R106 330
R147 1k
C965 0.01
R148 100k
JA911 (2/2)
LINE IN L
LINE IN R
TU
R143 330
TL
C109 220p
C110 220p
TR
R144 330
J101 DB916NS0
J102 DB216NS0
JA901 : AKB7075
JA911 : AKB7075
P
LD
TV
V2
V1
MD
R311 0
R310 0
R309 0
R308 0
R307 0
R306 0
R305 0
R304 0
R303 0
R302 0
R301 0
R300 0
CN101
KM200TA20
V2/OUT
V1/OUT
MD/OUT
PHONO
DVD/LD
TV/SAT
V2/IN
V1/IN
MD/IN
AG
AG
MD/IN
V1/IN
V2/IN
TV/SAT
DVD/LD
PHONO
MD/OUT
V1/OUT
V2/OUT
L ch
R ch
C CN1353

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"

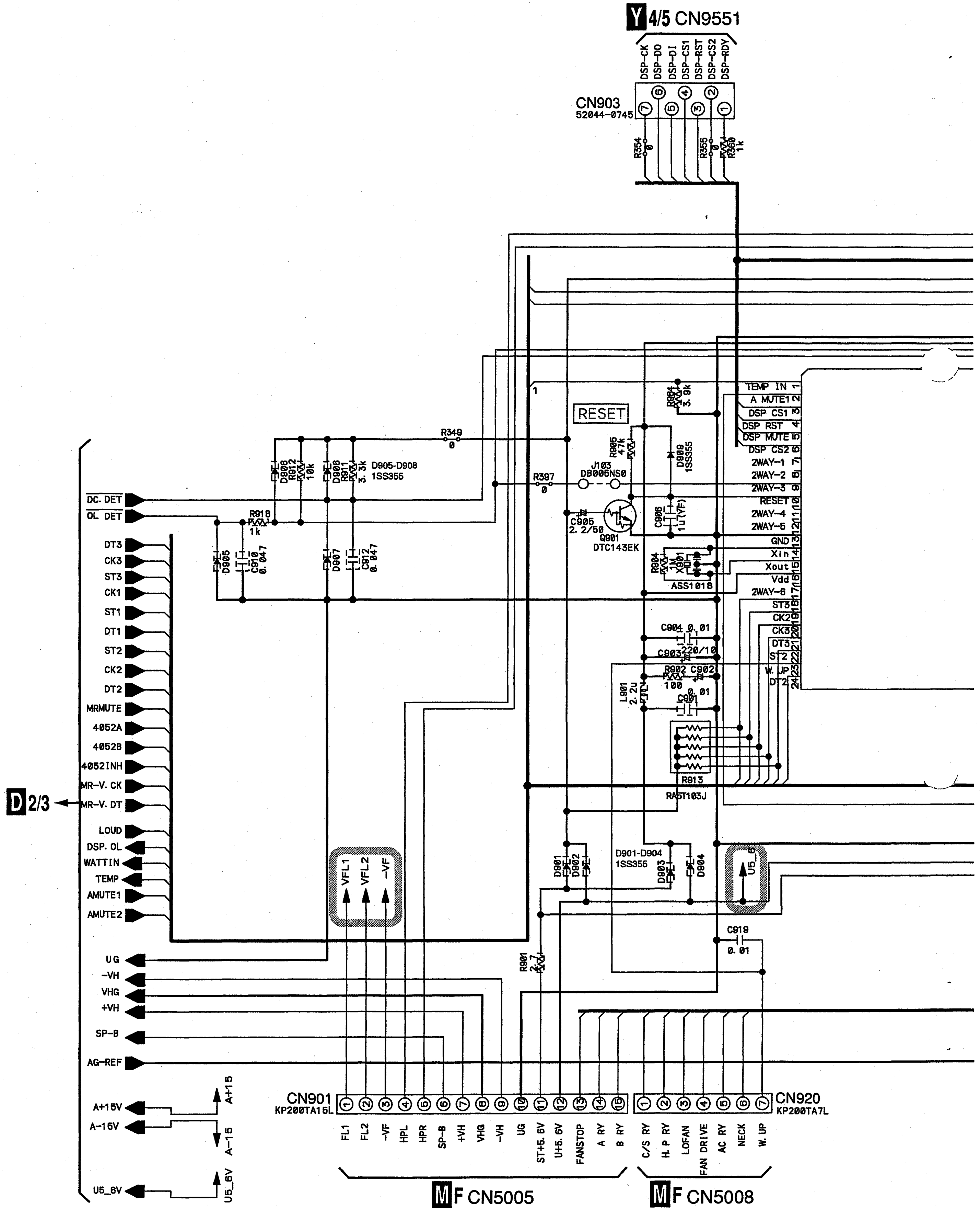
D 1/3 F
MAIN CONTROL ASSY
(AWX7340)

➡ : AUDIO SIGNAL ROUTE
LD ➡ : AUDIO SIGNAL ROUTE (LD)
TV ➡ : AUDIO SIGNAL ROUTE (TV)
V1 ➡ : AUDIO SIGNAL ROUTE (VCR1)
V2 ➡ : AUDIO SIGNAL ROUTE (VCR2)
MD ➡ : AUDIO SIGNAL ROUTE (MD)
P ➡ : AUDIO SIGNAL ROUTE (PHONO)
TU ➡ : AUDIO SIGNAL ROUTE (TUNER)
CD ➡ : AUDIO SIGNAL ROUTE (CD)
T2 ➡ : AUDIO SIGNAL ROUTE (TAPE2)


MAIN (MASTER) VOLUME
IC108 TC9482N
A+15v
A-15v
C128 10/50
C127 10/50
R121 100k
R122 100k
R125 100k
R126 100k
C129 10/50
C130 10/50
R837 1k
DT1
CK1
ST1
R838 1k
R839 1k
MODE SELECTOR
IC104 TC9163AF
C955 100p
C956 100p
C954 100p
SLch
SRch
FLch
SWch
Cch
FRch
DIRECT DSP 5.1CH
VDD
VSS
R341 0
R340 0
R331 0
R332 0
LOUD
IC105 UPC4570G2
LOUDNESS
C277 10/50
R271 100k
R281 100k
C271
R273 18k
R275 4.7k
C273 0.1 (YB)
R277 8.2k
C275 3300p (YB)
R279 8.2k
C279 0.01
R283 10k
Q271 2SC2878
R284 10k
Q272 2SC2878
C280 0.01
C276 3300p (YB)
R280 8.2k
R278 8.2k
R276 4.7k
C274 0.1 (YB)
R274 18k
C272 4700p
R272 100k
R282 100k
C278 10/50
IC103 (1/2) UPC4570G2
C111 10/50
C113 330p
R111 100k
R113 100k
C117 10/50
C115 0.01
R115 100k
BUFFER
IC103 (2/2) UPC4570G2
R112 100k
R114 100k
C112 10/50
C114 330p
C116 0.01
R116 100k
C118 10/50
CN104 KP200IA16L
L AG R AG FL AG FR AG SL AG SR AG C AG SW NC
MF CN5004
CN103 KM200TA10
+15V EX FL EX FR EX C AG AG EX SR EX SL EX SW -15V
C CN1302

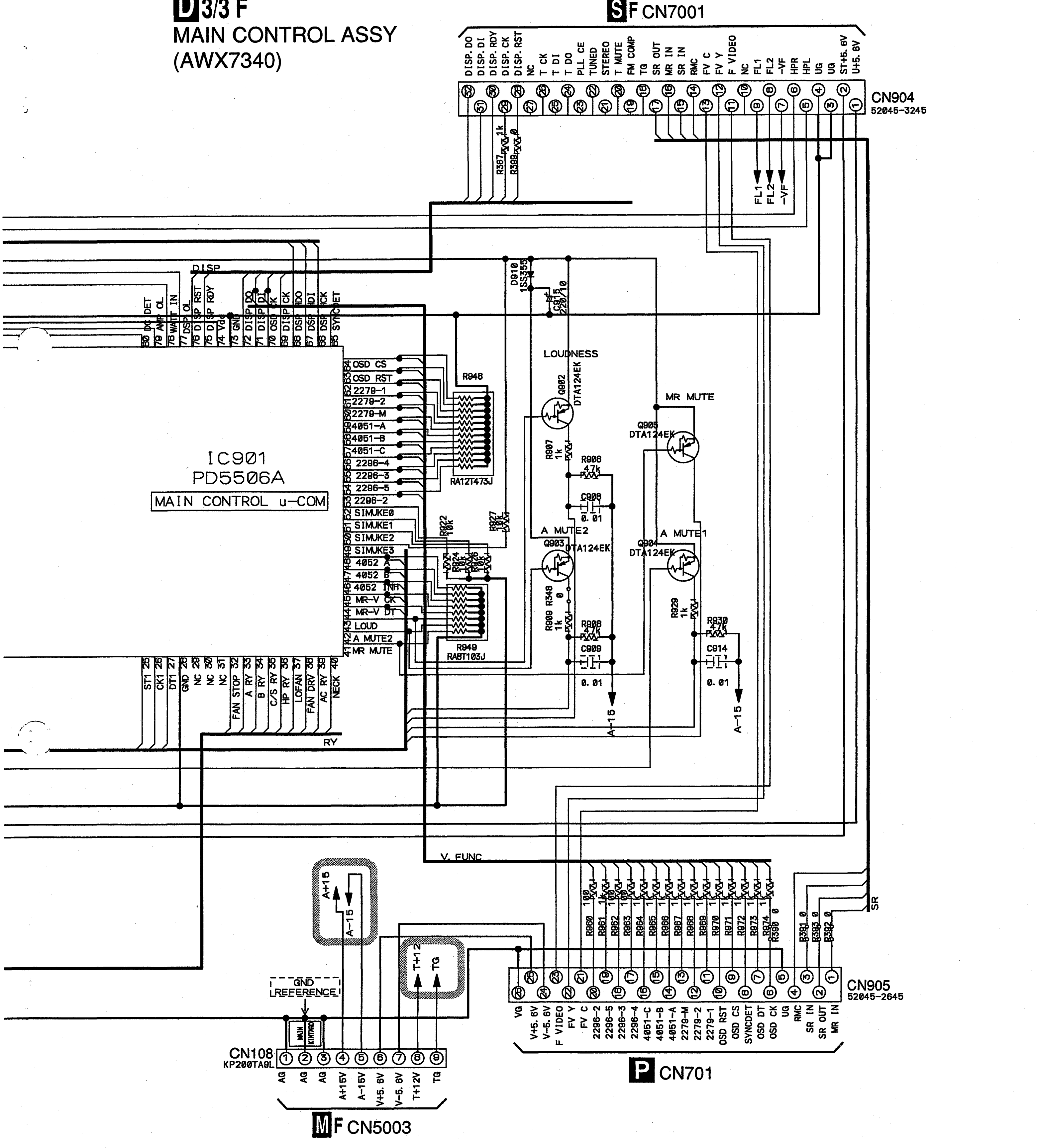
VSA-E07

3.2 MAIN CONTROL ASSY (3/3)


A
B
C
D
Y 4/5 CN9551
DSP-CK
DSP-DO
DSP-DI
DSP-CS1
DSP-RST
DSP-CS2
DSP-RDY
CN903
52044-0745
R354 0
R355 0
R350 1k
RESET
R904 3.9k
R905 47k
D909 1SS355
J103 DB005NS0
R397 0
R349 0
C905 2.2/50
Q901 DTC143EK
C906 1u(VF)
R903 1M
X901
ASS1018
D908
R912 10k
D906
R911 3.3k
D905-D908 1SS355
R910 1k
D905
C910 0.047
D907
C912 0.047
TEMP IN
A MUTE1
DSP CS1
DSP RST
DSP MUTE
DSP CS2
2WAY-1
2WAY-2
2WAY-3
RESET
2WAY-4
2WAY-5
GND
Xin
Xout
Vdd
2WAY-6
ST3
CK2
CK3
DT3
ST2
W. UP
DT2
C904 0.01
C903 220/10
R902 100
C902
L901 2.2u
C901 0.01
R913
RA5T103J
DC. DET
OL DET
DT3
CK3
ST3
CK1
ST1
DT1
ST2
CK2
DT2
MRMUTE
4052A
4052B
4052INH
MR-V. CK
MR-V. DT
D 2/3
LOUD
DSP. OL
WATTIN
TEMP
AMUTE1
AMUTE2
UG
-VH
VHG
+VH
SP-B
AG-REF
A+15V
A-15V
U5_6V
A+15
A-15
U5_6V
VFL1
VFL2
-VF
U5_6
D901
D902
D901-D904 1SS355
D903
D904
C919 0.01
R901 2.7
CN901 KP200TA15L
FL1
FL2
-VF
HPL
HPR
SP-B
+VH
VHG
-VH
UG
ST+5.6V
U+5.6V
FANSTOP
A RY
B RY
CN920 KP200TA7L
C/S RY
H.P RY
LOFAN
FAN DRIVE
AC RY
NECK
W. UP
MF CN5005
MF CN5008

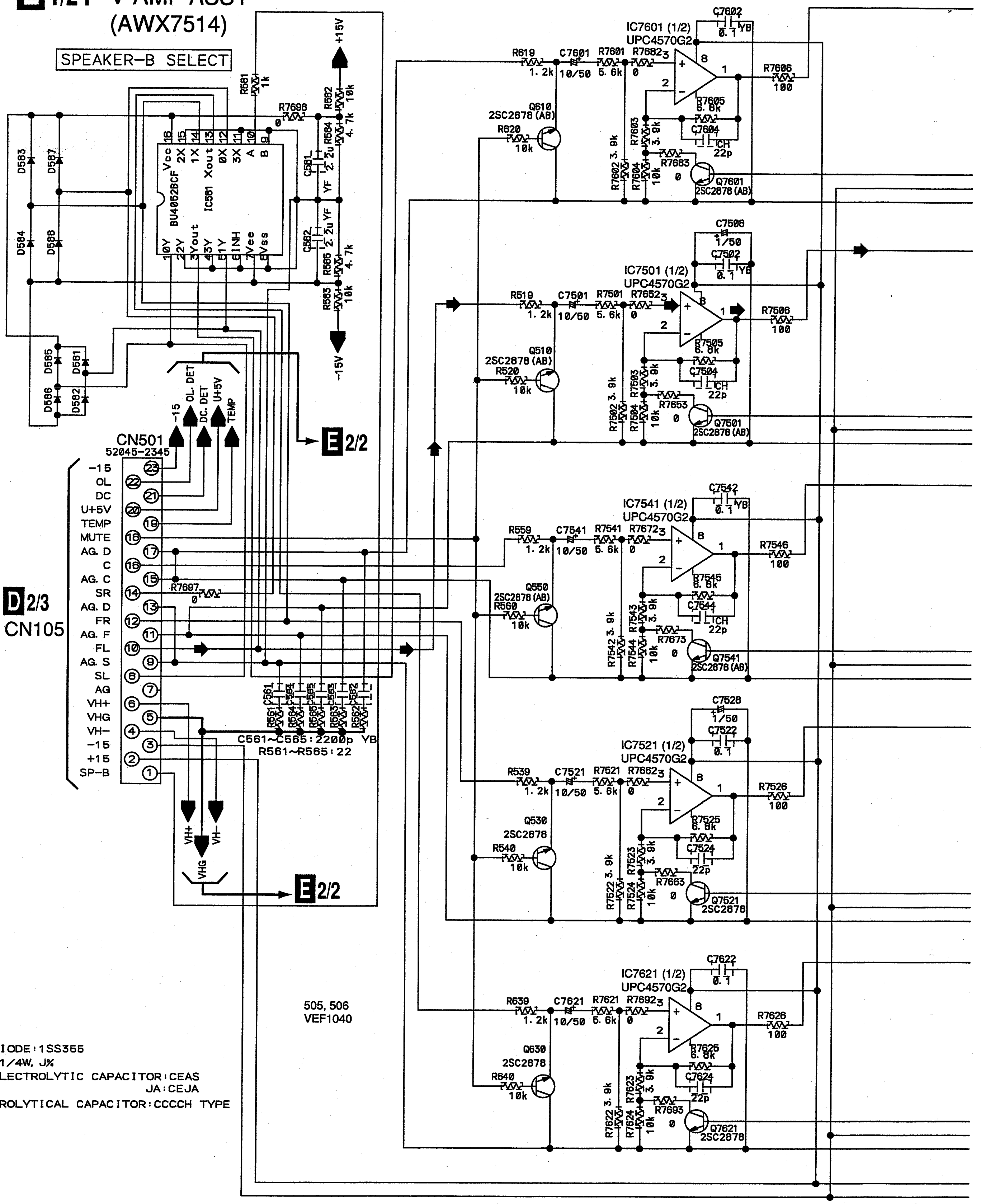
: The power supply is shown with the marked box.

D 3/3 F
MAIN CONTROL ASSY
(AWX7340)

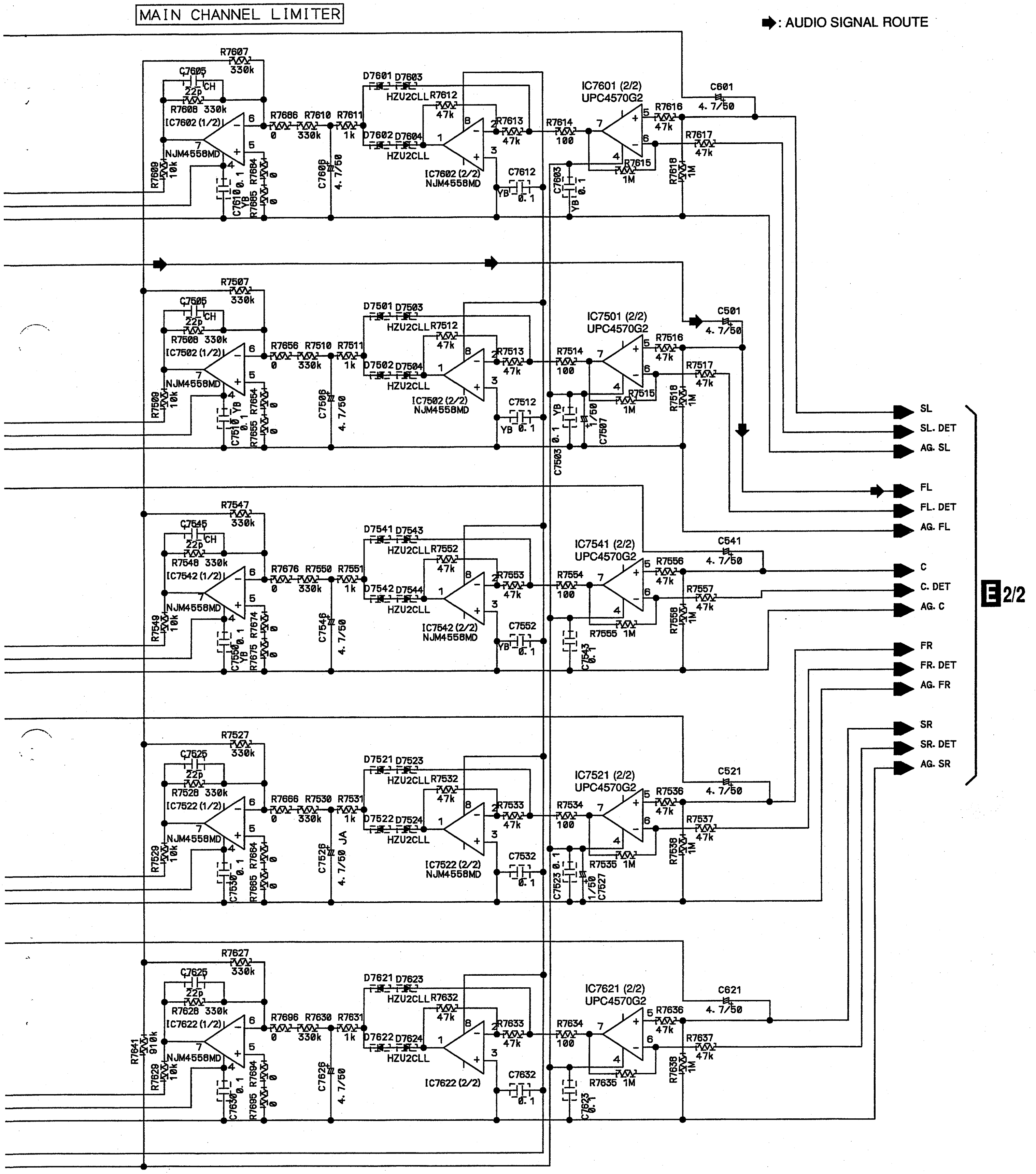

S F CN7001
DISP. DO
DISP. DI
DISP. RDY
DISP. CK
DISP. RST
NC
T CK
T DI
T DO
PLL CE
TUNED
STEREO
T MUTE
FM COMP
TG
SR OUT
MR IN
SR IN
RMC
FV C
FV Y
F VIDEO
NC
FL1
FL2
-VF
HPR
HPL
UG
UG
ST+5.6V
U+5.6V
CN904
52045-3245
R367 1k
R399 0
FL1
FL2
-VF
DISP
D910
1SS355
C915
220/10
LOUDNESS
Q902
DTA124EK
R907 1k
R906 47k
C906
0.01
MR MUTE
Q905
DTA124EK
A MUTE2
Q903
DTA124EK
A MUTE1
Q904
DTA124EK
R909 1k
R348 0
R908 47k
C909
0.01
R929 1k
R930 47k
C914
0.01
A-15
A-15
IC901
PD5506A
MAIN CONTROL u-COM
R948
RA12T473J
R949
RA8T103J
R922 10k
R927 10k
R924 10k
R925 10k
R926 10k
80 DC DET
79 AMP OL
78 WAIT IN
77 DSP OL
76 DISP RST
75 DISP RDY
74 Vdd
73 GND
72 DISP DO
71 DISP DI
70 OSD CK
69 DISP CK
68 DSP DO
67 DSP DI
66 DSP CK
65 SYNCDET
64 OSD CS
63 OSD RST
62 2279-1
61 2279-2
60 2279-M
59 4051-A
58 4051-B
57 4051-C
56 2296-4
55 2296-3
54 2296-5
53 2296-2
52 SIMUKE0
51 SIMUKE1
50 SIMUKE2
49 SIMUKE3
48 4052 A
47 4052 B
46 4052 INH
45 MR-V CK
44 MR-V DT
43 LOUD
42 A MUTE2
41 MR MUTE
25 ST1
26 CK1
27 DT1
28 GND
29 NC
30 NC
31 NC
32 FAN STOP
33 A RY
34 B RY
35 C/S RY
36 HP RY
37 LOFAN
38 FAN DRV
39 AC RY
40 NECK
RY
V. FUNC
R960 100
R961 1k
R962 100
R963 1k
R964 1k
R965 1k
R966 1k
R967 1k
R968 1k
R969 1k
R970 1k
R971 1k
R972 1k
R973 1k
R974 1k
R390 0
R391 0
R393 0
R392 0
SR
CN905
52045-2645
VG
V+5.6V
V-5.6V
F VIDEO
FV Y
FV C
2296-2
2296-5
2296-3
2296-4
4051-C
4051-B
4051-A
2279-M
2279-2
2279-1
OSD RST
OSD CS
SYNCDET
OSD DT
OSD CK
UG
RMC
SR IN
SR OUT
MR IN
P CN701
A+15
A-15
T+12
TG
GND REFERENCE
MAIN
KINTAKO
CN108
KP200TA9L
AG
AG
AG
A+15V
A-15V
V+5.6V
V-5.6V
T+12V
TG
M F CN5003

3.3 V-AMP ASSY (1/2)

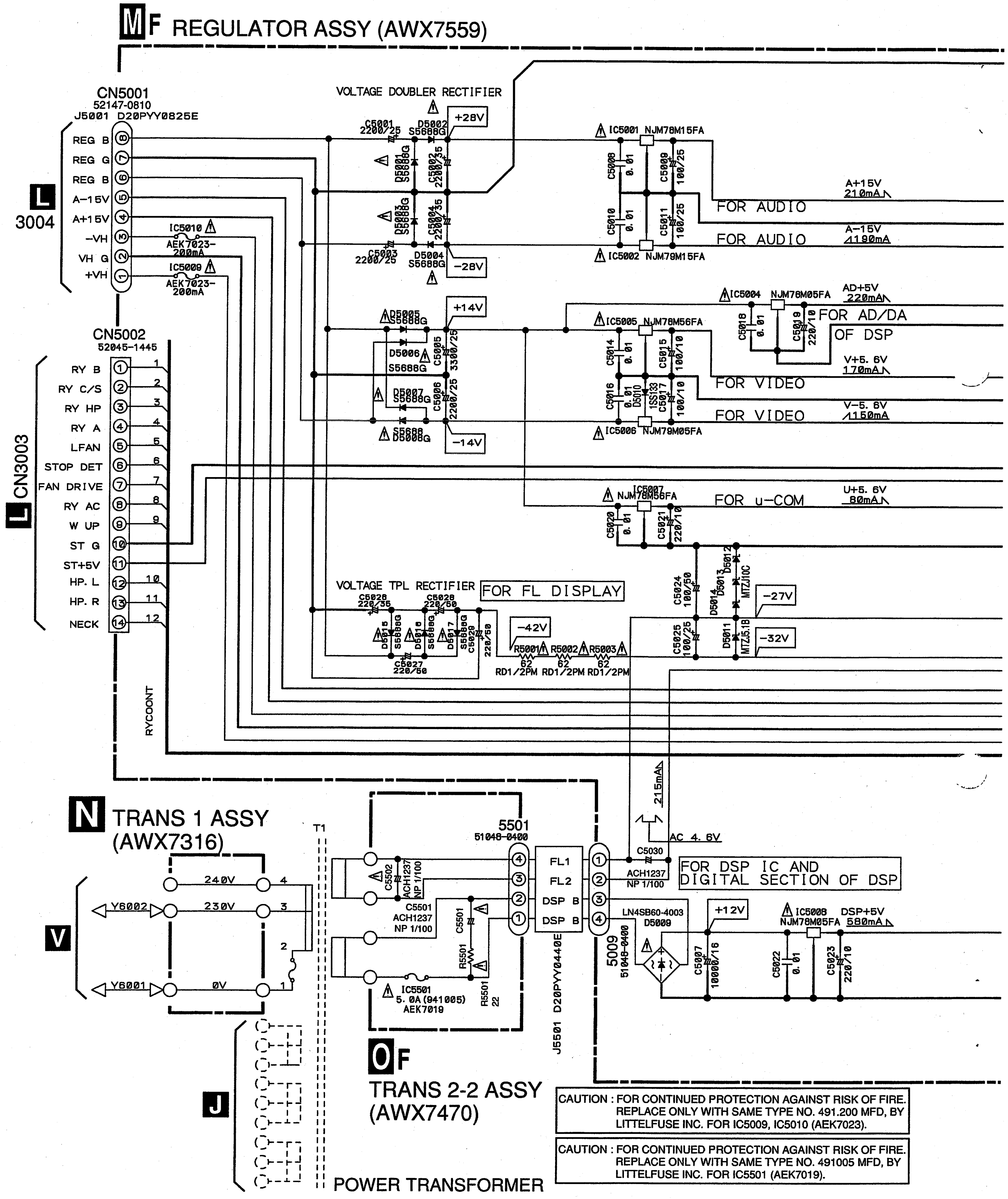
E 1/2 F V-AMP ASSY
(AWX7514)


SPEAKER–B SELECT
+15V
-15V
R581 1k
R582 10k
R7698 0
R584 4.7k
R585 4.7k
R583 10k
C581 2.2u YF
C582 2.2u YF
IC581 BU4052BCF
Vcc 2X 1X Xout 0X 3X A B
0Y 2Y Yout 3Y 1Y INH Vee Vss
D583
D587
D584
D588
D585
D581
D586
D582
OL. DET
DC. DET
U+5V
TEMP
-15
E 2/2
CN501
52045–2345
-15
OL
DC
U+5V
TEMP
MUTE
AG. D
C
AG. C
SR
AG. D
FR
AG. F
FL
AG. S
SL
AG
VH+
VHG
VH–
-15
+15
SP–B
R7697 0
D 2/3
CN105
C561 C564 C565 C563 C562
R561 R564 R565 R563 R562
C561~C565 : 2200p YB
R561~R565 : 22
VH+
VH–
VHG
E 2/2
505, 506
VEF1040
IC7601 (1/2)
UPC4570G2
C7602 0.1 YB
R619 1.2k
C7601 10/50
R7601 5.6k
R7602 0
R7606 100
R7605 6.8k
C7604 CH 22p
R7603 3.9k
R7602 3.9k
R7604 10k
R7683 0
Q7601 2SC2878 (AB)
Q610 2SC2878 (AB)
R620 10k
IC7501 (1/2)
UPC4570G2
C7508 1/50
C7502 0.1 YB
R519 1.2k
C7501 10/50
R7501 5.6k
R7652 0
R7506 100
R7505 6.8k
C7504 CH 22p
R7503 3.9k
R7502 3.9k
R7504 10k
R7653 0
Q7501 2SC2878 (AB)
Q510 2SC2878 (AB)
R520 10k
IC7541 (1/2)
UPC4570G2
C7542 0.1 YB
R559 1.2k
C7541 10/50
R7541 5.6k
R7672 0
R7546 100
R7545 6.8k
C7544 CH 22p
R7543 3.9k
R7542 3.9k
R7544 10k
R7673 0
Q7541 2SC2878 (AB)
Q550 2SC2878 (AB)
R560 10k
IC7521 (1/2)
UPC4570G2
C7528 1/50
C7522 0.1
R539 1.2k
C7521 10/50
R7521 5.6k
R7662 0
R7526 100
R7525 6.8k
C7524 22p
R7523 3.9k
R7522 3.9k
R7524 10k
R7663 0
Q7521 2SC2878
Q530 2SC2878
R540 10k
IC7621 (1/2)
UPC4570G2
C7622 0.1
R639 1.2k
C7621 10/50
R7621 5.6k
R7692 0
R7626 100
R7625 6.8k
C7624 22p
R7623 3.9k
R7622 3.9k
R7624 10k
R7693 0
Q7621 2SC2878
Q630 2SC2878
R640 10k

·NO MARK DIODE : 1SS355
·RESISTOR : 1/4W, J%
·NO MARK ELECTROLYTIC CAPACITOR : CEAS
JA : CEJA
·NON ELECTROLYTICAL CAPACITOR : CCCCH TYPE

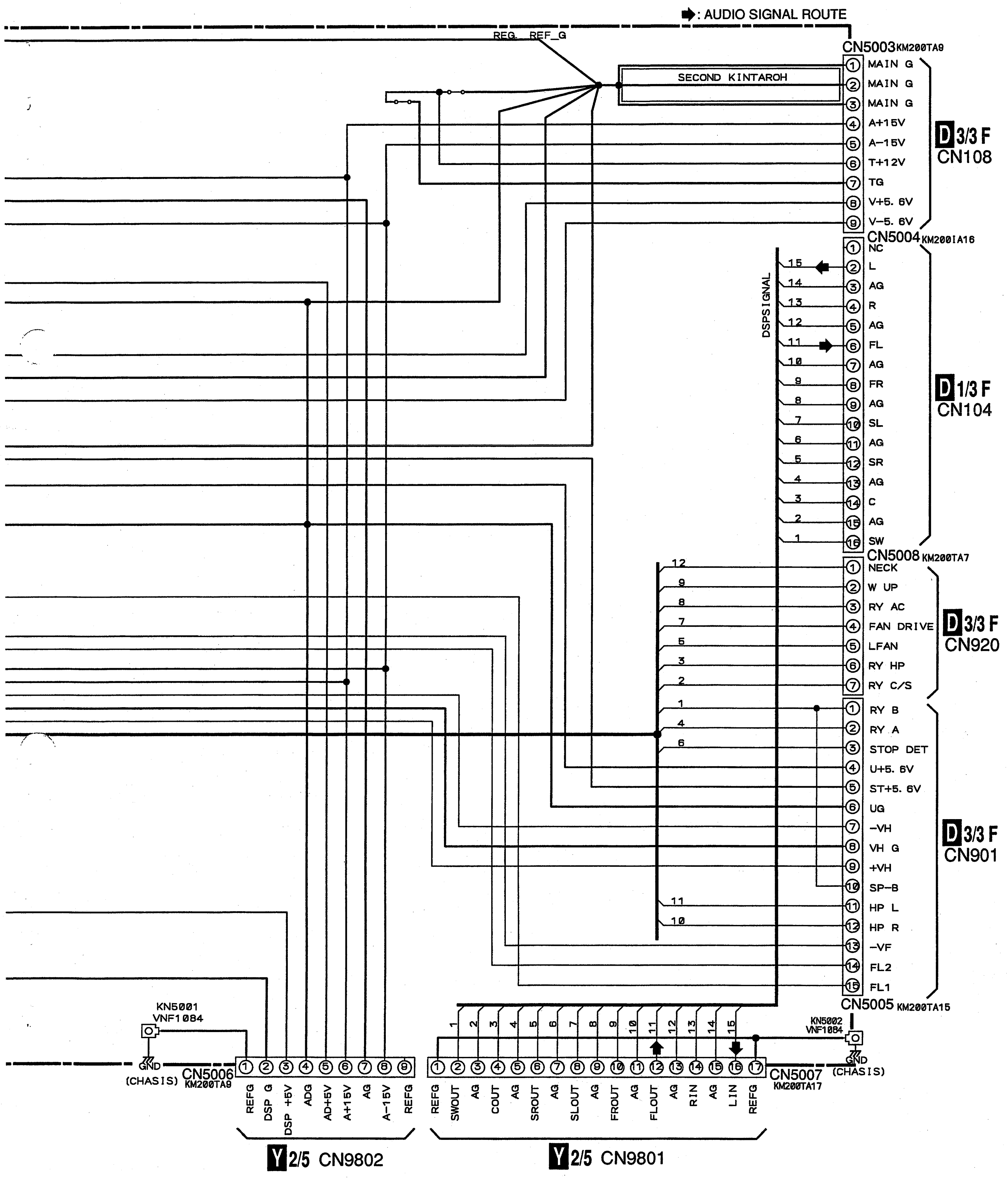

MAIN CHANNEL LIMITER
: AUDIO SIGNAL ROUTE
R7607 330k
C7605 22p CH
R7608 330k
IC7602 (1/2)
NJM4558MD
R7609 10k
C7610 YB 0.1
R7685 0
R7684 0
R7686 0
R7610 330k
R7611 1k
C7606 4.7/50
D7601 D7603
D7602 D7604
HZU2CLL
R7612 47k
R7613 47k
IC7602 (2/2) NJM4558MD
C7612 YB 0.1
R7614 100
C7603 YB 0.1
IC7601 (2/2) UPC4570G2
R7615 1M
R7616 47k
R7617 47k
R7618 1M
C601 4.7/50
R7507 330k
C7505 22p CH
R7508 330k
IC7502 (1/2)
NJM4558MD
R7509 10k
C7510 YB 0.1
R7655 0
R7654 0
R7656 0
R7510 330k
R7511 1k
C7506 4.7/50
D7501 D7503
D7502 D7504
HZU2CLL
R7512 47k
R7513 47k
IC7502 (2/2) NJM4558MD
C7512 YB 0.1
R7514 100
C7503 YB 0.1
C7507 1/50
IC7501 (2/2) UPC4570G2
R7515 1M
R7516 47k
R7517 47k
R7518 1M
C501 4.7/50
R7547 330k
C7545 22p CH
R7548 330k
IC7542 (1/2)
NJM4558MD
R7549 10k
C7550 YB 0.1
R7675 0
R7674 0
R7676 0
R7550 330k
R7551 1k
C7546 4.7/50
D7541 D7543
D7542 D7544
HZU2CLL
R7552 47k
R7553 47k
IC7542 (2/2) NJM4558MD
C7552 YB 0.1
R7554 100
C7543 0.1
IC7541 (2/2) UPC4570G2
R7555 1M
R7556 47k
R7557 47k
R7558 1M
C541 4.7/50
R7527 330k
C7525 22p
R7528 330k
IC7522 (1/2)
NJM4558MD
R7529 10k
C7530 0.1
R7665 0
R7664 0
R7666 0
R7530 330k
R7531 1k
C7526 4.7/50 JA
D7521 D7523
D7522 D7524
HZU2CLL
R7532 47k
R7533 47k
IC7522 (2/2) NJM4558MD
C7532 0.1
R7534 100
C7523 0.1
C7527 1/50
IC7521 (2/2) UPC4570G2
R7535 1M
R7536 47k
R7537 47k
R7538 1M
C521 4.7/50
R7627 330k
C7625 22p
R7628 330k
IC7622 (1/2)
NJM4558MD
R7641 910k
R7629 10k
C7630 0.1
R7695 0
R7694 0
R7696 0
R7630 330k
R7631 1k
C7626 4.7/50
D7621 D7623
D7622 D7624
HZU2CLL
R7632 47k
R7633 47k
IC7622 (2/2)
C7632 0.1
R7634 100
C7623 0.1
IC7621 (2/2) UPC4570G2
R7635 1M
R7636 47k
R7637 47k
R7638 1M
C621 4.7/50
SL
SL. DET
AG. SL
FL
FL. DET
AG. FL
C
C. DET
AG. C
FR
FR. DET
AG. FR
SR
SR. DET
AG. SR
E 2/2

3.4 REGULATOR, TRANS 1 and TRANS 2-2 ASSYS

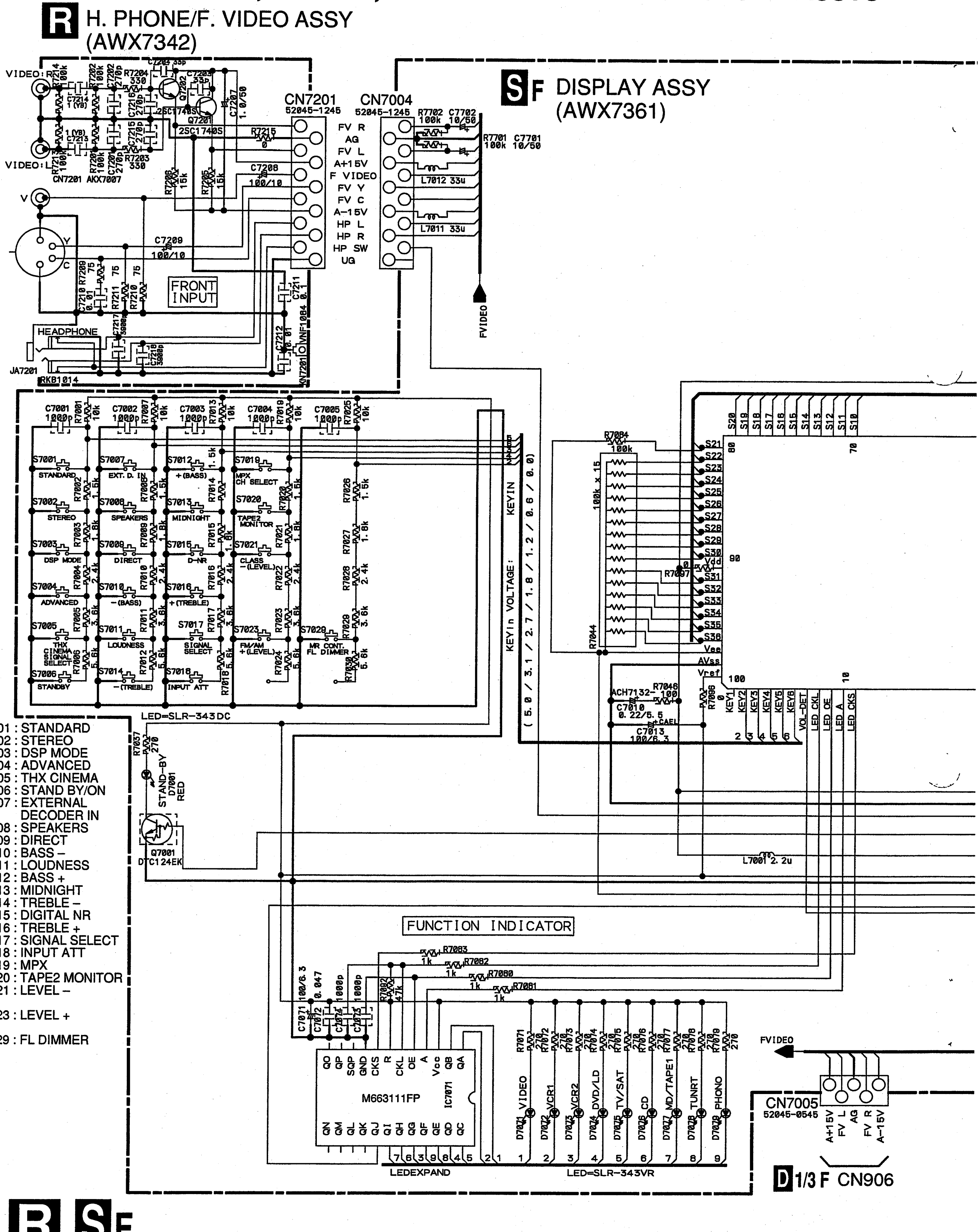

MF REGULATOR ASSY (AWX7559)
CN5001
52147-0810
J5001 D20PYY0825E
REG B 8
REG G 7
REG B 6
A-15V 5
A+15V 4
-VH 3
VH G 2
+VH 1
L 3004
IC5010
AEK7023-200mA
IC5009
AEK7023-200mA
VOLTAGE DOUBLER RECTIFIER
C5001 2200/25
D5002 S5688G
+28V
D5001 S5688G
C5002 2200/35
D5003 S5688G
C5004 2200/35
C5003 2200/25
D5004 S5688G
-28V
IC5001 NJM78M15FA
C5008 0.01
C5009 100/25
C5010 0.01
C5011 100/25
IC5002 NJM79M15FA
FOR AUDIO
FOR AUDIO
A+15V 210mA
A-15V 190mA
IC5004 NJM78M05FA
AD+5V 220mA
C5018 0.01
C5019 220/10
FOR AD/DA OF DSP
D5005 S5688G
+14V
D5006 S5688G
C5005 3300/25
D5007 S5688G
C5006 2200/25
S5688 D5008G
-14V
IC5005 NJM78M56FA
C5014 0.01
C5015 100/10
C5016 0.01
D5010 1SS133
C5017 100/10
IC5006 NJM79M05FA
FOR VIDEO
FOR VIDEO
V+5.6V 170mA
V-5.6V 150mA
CN5002
52045-1445
RY B 1
RY C/S 2
RY HP 3
RY A 4
LFAN 5
STOP DET 6
FAN DRIVE 7
RY AC 8
W UP 9
ST G 10
ST+5V 11
HP. L 12
HP. R 13
NECK 14
L CN3003
RYCOONT
IC5007 NJM78M56FA
C5020 0.01
C5021 220/10
FOR u-COM
U+5.6V 80mA
VOLTAGE TPL RECTIFIER
FOR FL DISPLAY
C5026 220/35
C5028 220/50
D5015 S5688G
D5016 S5688G
D5017 S5688G
C5029 220/50
C5027 220/50
-42V
R5001 62 RD1/2PM
R5002 62 RD1/2PM
R5003 62 RD1/2PM
C5024 100/50
D5013 D5014
D5012 MTZJ10C
-27V
C5025 100/25
D5011 MTZJ5.1B
-32V
215mA
AC 4.6V
N TRANS 1 ASSY (AWX7316)
T1
240V 4
Y6002 230V 3
2
Y6001 0V 1
V
J
POWER TRANSFORMER
C5502 ACH1237 NP 1/100
C5501 ACH1237 NP 1/100
C5501
R5501
IC5501 5.0A (941005) AEK7019
R5501 22
5501
51048-0400
FL1
FL2
DSP B
DSP B
J5501 D20PYY0440E
5009
51048-0400
C5030 ACH1237 NP 1/100
FOR DSP IC AND DIGITAL SECTION OF DSP
LN4SB60-4003 D5009
+12V
C5007 10000/16
IC5008 NJM78M05FA
DSP+5V 580mA
C5022 0.01
C5023 220/10
OF TRANS 2-2 ASSY (AWX7470)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.200 MFD, BY LITTELFUSE INC. FOR IC5009, IC5010 (AEK7023).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491005 MFD, BY LITTELFUSE INC. FOR IC5501 (AEK7019).


: AUDIO SIGNAL ROUTE
REG. REF_G
SECOND KINTAROH
CN5003 KM200TA9
MAIN G
MAIN G
MAIN G
A+15V
A−15V
T+12V
TG
V+5. 6V
V−5. 6V
D 3/3 F
CN108
CN5004 KM200IA16
NC
L
AG
R
AG
FL
AG
FR
AG
SL
AG
SR
AG
C
AG
SW
DSPSIGNAL
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
D 1/3 F
CN104
CN5008 KM200TA7
NECK
W UP
RY AC
FAN DRIVE
LFAN
RY HP
RY C/S
D 3/3 F
CN920
12
9
8
7
5
3
2
1
4
6
11
10
RY B
RY A
STOP DET
U+5. 6V
ST+5. 6V
UG
−VH
VH G
+VH
SP−B
HP L
HP R
−VF
FL2
FL1
D 3/3 F
CN901
CN5005 KM200TA15
KN5001
VNF1084
GND
(CHASIS)
CN5006
KM200TA9
REFG
DSP G
DSP +5V
DSP G
ADG
AD+5V
A+15V
AG
A−15V
REFG
Y 2/5 CN9802
KN5002
VNF1084
GND
(CHASIS)
CN5007
KM200TA17
REFG
SWOUT
AG
COUT
AG
SROUT
AG
SLOUT
AG
FROUT
AG
FLOUT
AG
RIN
AG
LIN
REFG
Y 2/5 CN9801

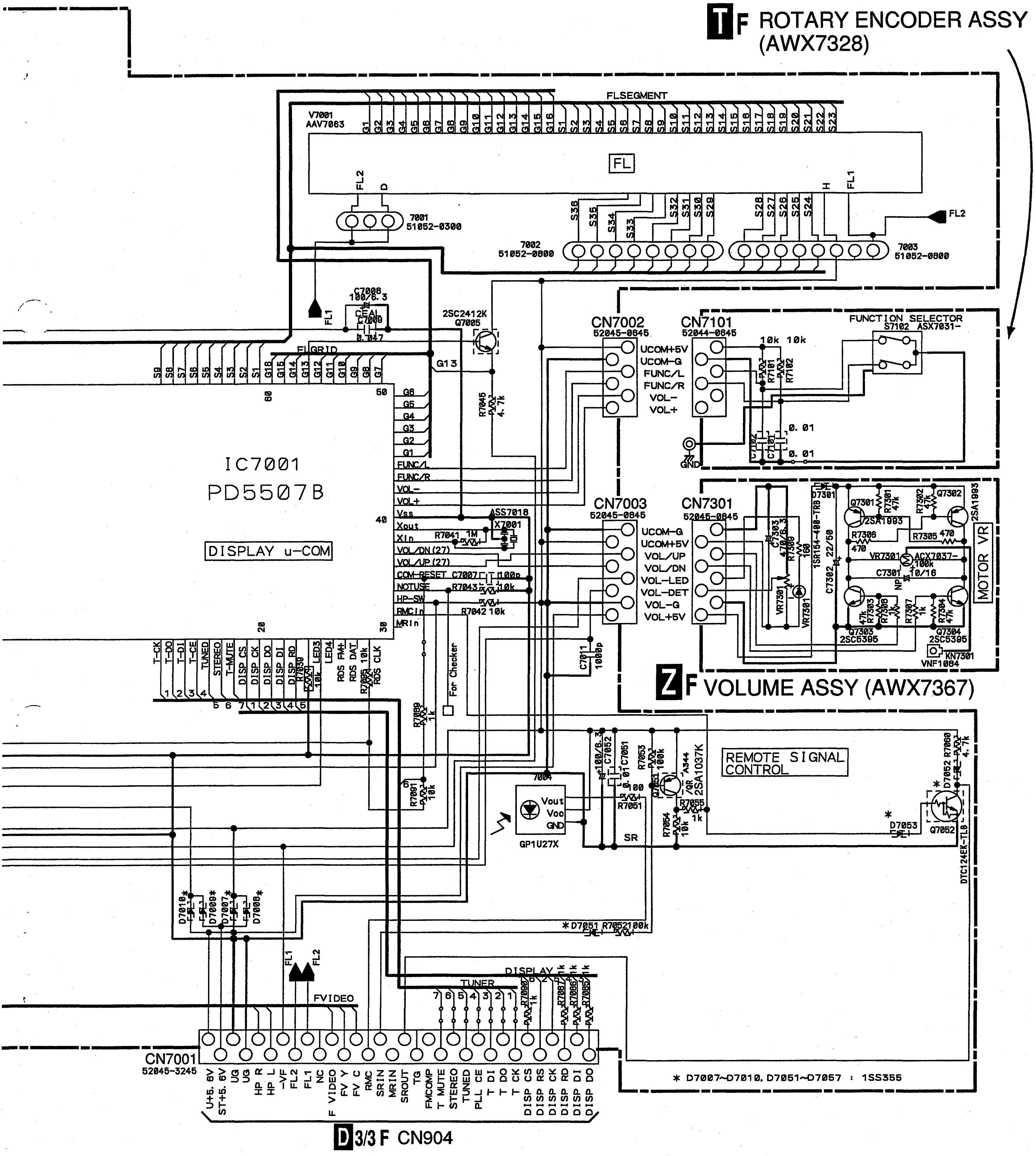
3.5 H. PHONE/F. VIDEO, DISPLAY, ROTARY ENCODER and VOLUME ASSYS


R H. PHONE/F. VIDEO ASSY
(AWX7342)
SF DISPLAY ASSY
(AWX7361)
VIDEO:R
VIDEO:L
CN7201 AKX7007
V
Y
C
HEADPHONE
JA7201
RKB1014
FRONT INPUT
VNF1084
CN7201
52045-1245
CN7004
52045-1245
FV R
AG
FV L
A+15V
F VIDEO
FV Y
FV C
A-15V
HP L
HP R
HP SW
UG
R7702 100k
C7702 10/50
R7701 100k
C7701 10/50
L7012 33u
L7011 33u
FVIDEO
Q7201 2SC1740S
Q7202 2SC1740S
R7215 0
C7208 100/10
C7209 100/10
R7208 15k
R7205 15k
C7207 1.0/50
R7204 330
R7203 330
R7209 75
R7211 75
R7210 75
C7210 0.01
C7211 0.1
C7212 0.01
C7217 3900p
C7218 3900p
C7001 1000p
C7002 1000p
C7003 1000p
C7004 1000p
C7005 1000p
R7001 10k
R7007 10k
R7013 10k
R7019 10k
R7025 10k
S7001 STANDARD
S7002 STEREO
S7003 DSP MODE
S7004 ADVANCED
S7005 THX CINEMA SIGNAL SELECT
S7006 STANDBY
S7007 EXT. D. IN
S7008 SPEAKERS
S7009 DIRECT
S7010 -(BASS)
S7011 LOUDNESS
S7012 +(BASS)
S7013 MIDNIGHT
S7014 -(TREBLE)
S7015 D-NR
S7016 +(TREBLE)
S7017 SIGNAL SELECT
S7018 INPUT ATT
S7019 MPX CH SELECT
S7020 TAPE2 MONITOR
S7021 CLASS -(LEVEL)
S7023 FM/AM +(LEVEL)
S7029 MR CONT. FL DIMMER
1.5k
1.8k
2.4k
3.6k
5.6k
KEYIN
KEYIn VOLTAGE : (5.0 / 3.1 / 2.7 / 1.8 / 1.2 / 0.6 / 0.0)
R7084 100k
100k x 15
R7044
R7087 0
S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20
S21 S22 S23 S24 S25 S26 S27 S28 S29 S30 Vdd S31 S32 S33 S34 S35 S36 Vee AVss Vref
80 70 90 100 10
KEY1 KEY2 KEY3 KEY4 KEY5 KEY6 VOL-DET LED CKL LED OE LED A LED CKS
ACH7132
R7046 100
R7086 0
C7010 0.22/5.5
C7013 100/6.3
LED=SLR-343DC
R7037 270
D7001 RED STAND-BY
Q7001 DTC124EK
L7001 2.2u
FUNCTION INDICATOR
R7083 1k
R7082 1k
R7080 1k
R7081 1k
C7071 100/6.3
C7072 0.047
C7074 1000p
C7073 1000p
R7092 47k
IC7071
M663111FP
QO QP SQP GND CKS R CKL OE A Vcc QB QA
QN QM QL QK QJ QI QH QG QF QE QD QC
R7071 270
R7072 270
R7073 270
R7074 270
R7075 270
R7076 270
R7077 270
R7078 270
R7079 270
D7071 VIDEO
D7072 VCR1
D7073 VCR2
D7074 DVD/LD
D7075 TV/SAT
D7076 CD
D7077 MD/TAPE1
D7078 TUNRT
D7079 PHONO
LEDEXPAND
LED=SLR-343VR
FVIDEO
CN7005
52045-0545
A+15V
FV L
AG
FV R
A-15V
D 1/3 F CN906

S7001 : STANDARD
S7002 : STEREO
S7003 : DSP MODE
S7004 : ADVANCED
S7005 : THX CINEMA
S7006 : STAND BY/ON
S7007 : EXTERNAL DECODER IN
S7008 : SPEAKERS
S7009 : DIRECT
S7010 : BASS –
S7011 : LOUDNESS
S7012 : BASS +
S7013 : MIDNIGHT
S7014 : TREBLE –
S7015 : DIGITAL NR
S7016 : TREBLE +
S7017 : SIGNAL SELECT
S7018 : INPUT ATT
S7019 : MPX
S7020 : TAPE2 MONITOR
S7021 : LEVEL –

S7023 : LEVEL +

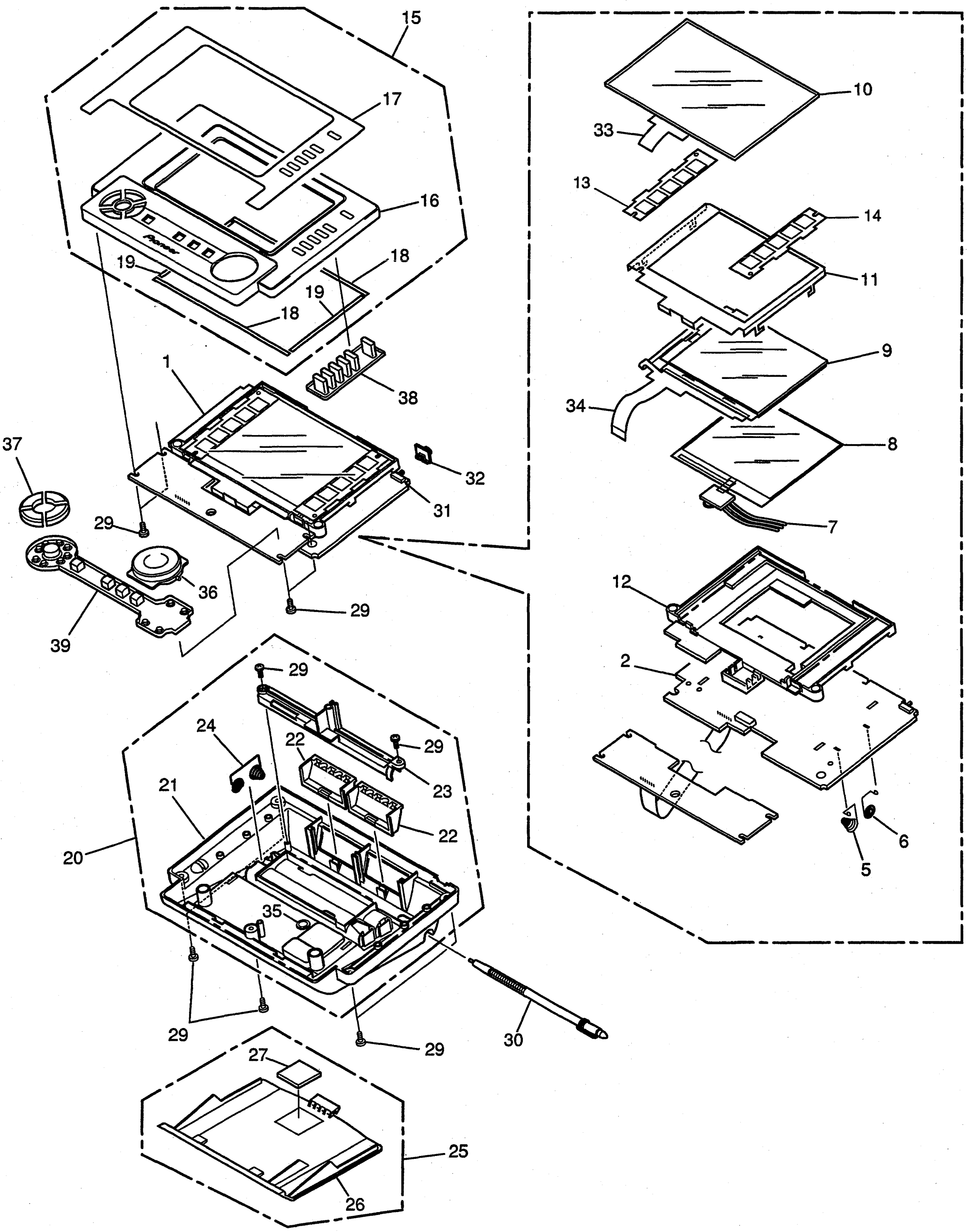
S7029 : FL DIMMER


TF ROTARY ENCODER ASSY (AWX7328)
FLSEGMENT
V7001 AAV7063
FL
7001 51052-0300
7002 51052-0800
7003 51052-0800
FL1
FL2
C7008 100/6.3
CERAL
C7009 0.047
FLGRID
2SC2412K Q7005
G13
R7045 4.7k
IC7001
PD5507B
DISPLAY u-COM
FUNC/L
FUNC/R
VOL-
VOL+
Vss
Xout
XIn
VOL/DN(27)
VOL/UP(27)
COM-RESET
NOTUSE
HP-SW
RMCIn
MRIn
ASS7018
X7001
R7041 1M
C7007 100p
R7043 10k
R7042 10k
CN7002 52045-0645
UCOM+5V
UCOM-G
CN7101 52044-0645
FUNCTION SELECTOR S7102 ASX7031-
R7101 10k
R7102 10k
C7102 0.01
C7101 0.01
GND
CN7003 52045-0645
CN7301 52045-0645
VOL/UP
VOL/DN
VOL-LED
VOL-DET
VOL-G
VOL+5V
D7301 1SR154-400-TRB
C7303 470/6.3
R7309 160
C7302 22/50
VR7301
Q7301 2SA1993
Q7302 2SA1993
R7301 47k
R7302 47k
R7306 470
R7305 470
VR7301 ACX7037-100k
C7301 10/16
Q7303 2SC5395
Q7304 2SC5395
R7303 47k
R7308 1k
R7307 1k
R7304 47k
KN7301 VNF1084
MOTOR VR
C7011 1000p
ZF VOLUME ASSY (AWX7367)
T-CK T-DO T-DI T-CE TUNED STEREO T-MUTE DISP CS DISP CK DISP DO DISP DI DISP RD
R7039 10k
LED3 LED4 RDS FM+ RDS DAT RDS CLK
R7085 10k
For Checker
R7089 1k
R7091 10k
C7052 100/6.3
C7051 0.01
R7053 100k
R7051 100
Q7051 2SA1037K
R7055 1k
R7054 10k
7004
Vout Vcc GND
GP1U27X
SR
REMOTE SIGNAL CONTROL
D7052 R7060 4.7k
D7053
Q7052
DTC124EK-TL8
D7010 D7009 D7007 D7008
D7051 R7052 100k
FL1 FL2
FVIDEO
TUNER
DISPLAY
R7090 1k R7087 1k R7086 1k R7085 1k
CN7001 52045-3245
U+5.6V ST+5.6V UG UG HP R HP L -VF FL2 FL1 NC F VIDEO FV Y FV C RMC SRIN MRIN SROUT TG FMCOMP T MUTE STEREO TUNED PLL CE T DI T DO T CK DISP CS DISP RS DISP CK DISP RD DISP DI DISP DO
* D7007~D7010, D7051~D7057 : 1SS355
D 3/3 F CN904

4. REMOTE CONTROL UNIT [AXD7217(CU-VSA032)]

4.1 EXPLODED VIEWS AND PARTS LIST

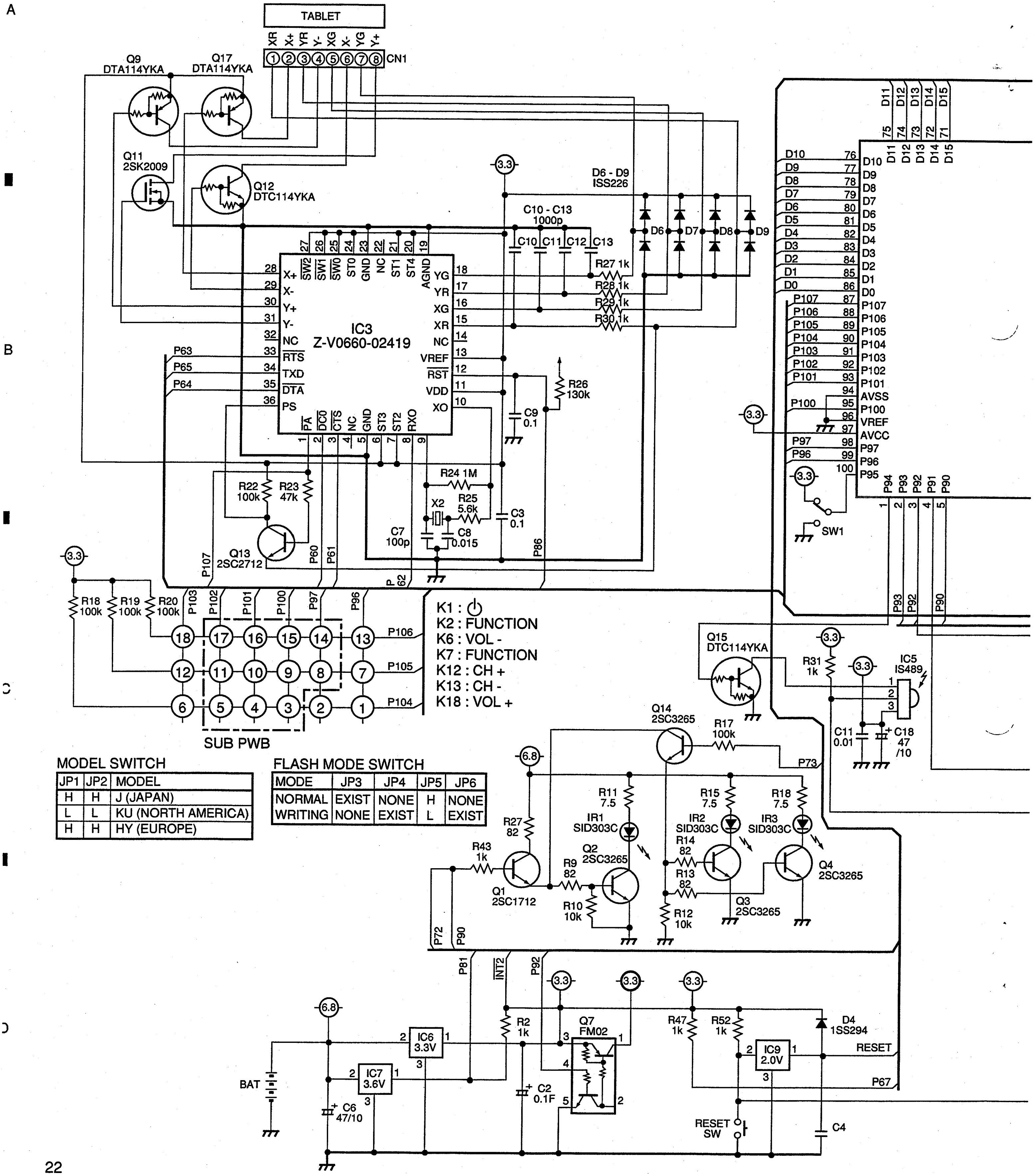
NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on the product are used for disassembly.*


15
17
16
18
19
19
18
1
38
37
32
31
29
36
29
39
10
33
13
14
11
9
34
8
7
12
2
6
5
29
24
22
29
21
23
22
20
35
29
29
29
30
27
25
26

• PARTS LIST

Mark	No.	Description	Part No.
	1	PWB Assy	RRC4–7251–01
	2	PCB Assy	AZC7296
	3	•••••	
	4	•••••	
	5	Terminal A	411RRC15801R
	6	Terminal B	411RRC15901R
	7	Jumper Cable	E–AA1446–001
	8	EL Module	AZC7294
	9	LCD Module	AZC7295
	10	Touch Panel	NTX01005701R
	11	Frame	501RRC01901R
	12	LCD Holder	AZN7787
	13	Seal A	AZA7369
	14	Seal B	AZA7370
	15	Upper Case Assy	RRC4–7251–02
	16	Case A	AZN7795
	17	Name Plate	AZA7375
	18	Cushion A	701RRC04801R
	19	Cushion B	701RRC04901R
	20	Bottom Case Assy	RRC4–7251–03
	21	Case B	AZN7796
	22	Filter	AZA7343
	23	Pen Holder	AZN7798
	24	Terminal	413RRC11201R
	25	Battery Cover Assy	RRC4–7251–04
	26	Battery Cover	AZN7797
	27	Cushion C	701RRC03501R
	28	•••••	
	29	Screw	AZB7144
	30	Touch Pen	AZA7350
	31	Slide Switch	JSB1220–0111
	32	Slide Knob	AZA7365
	33	FPC Connector	CFP5519–0101
	34	FPC Connector	E-CP0535–008
	35	MT Switch	JPM1030–0801
	36	Key Top A	AZA7363
	37	Key Top B	AZA7364
	38	Rubber Sheet A	AZA7348
	39	Rubber Sheet B	AZA7371

4.2 SCHEMATIC DIAGRAM


A
B
C
D
TABLET
XR X+ YR Y- XG X- YG Y+
①②③④⑤⑥⑦⑧ CN1
Q9 DTA114YKA
Q17 DTA114YKA
Q11 2SK2009
Q12 DTC114YKA
D6 - D9 ISS226
D6 D7 D8 D9
C10 - C13 1000p
C10 C11 C12 C13
3.3
IC3
Z-V0660-02419
28 X+
29 X-
30 Y+
31 Y-
32 NC
33 RTS
34 TXD
35 DTA
36 PS
27 SW2
26 SW1
25 SW0
24 ST0
23 GND
22 NC
21 ST1
20 ST4
19 AGND
18 YG
17 YR
16 XG
15 XR
14 NC
13 VREF
12 RST
11 VDD
10 XO
1 PA
2 DC0
3 CTS
4 NC
5 GND
6 ST3
7 ST2
8 RXO
9
R27 1k
R28 1k
R29 1k
R30 1k
R26 130k
C9 0.1
R24 1M
R25 5.6k
X2
C7 100p
C8 0.015
C3 0.1
R22 100k
R23 47k
Q13 2SC2712
P63
P65
P64
P107
P60
P61
P62
P86
P103 P102 P101 P100 P97 P96
R18 100k
R19 100k
R20 100k
18 17 16 15 14 13
12 11 10 9 8 7
6 5 4 3 2 1
P106
P105
P104
SUB PWB
K1 : ⏻
K2 : FUNCTION
K6 : VOL -
K7 : FUNCTION
K12 : CH +
K13 : CH -
K18 : VOL +
D11 D12 D13 D14 D15
75 74 73 72 71
D10 76
D9 77
D8 78
D7 79
D6 80
D5 81
D4 82
D3 83
D2 84
D1 85
D0 86
P107 87
P106 88
P105 89
P104 90
P103 91
P102 92
P101 93
94 AVSS
P100 95
96 VREF
97 AVCC
P97 98
P96 99
100 P95
P94 P93 P92 P91 P90
1 2 3 4 5
SW1
P93 P92 P90
Q15 DTC114YKA
R31 1k
IC5 IS489
1 2 3
C11 0.01
C18 47 /10
Q14 2SC3265
R17 100k
P73
6.8
R11 7.5
IR1 SID303C
R15 7.5
IR2 SID303C
R18 7.5
IR3 SID303C
R27 82
R43 1k
Q1 2SC1712
R9 82
R10 10k
Q2 2SC3265
R14 82
R13 82
R12 10k
Q3 2SC3265
Q4 2SC3265
P72
P90
P81
INT2
P92
BAT
C6 47/10
IC7 3.6V
IC6 3.3V
R2 1k
C2 0.1F
Q7 FM02
R47 1k
R52 1k
IC9 2.0V
D4 1SS294
RESET
P67
RESET SW
C4

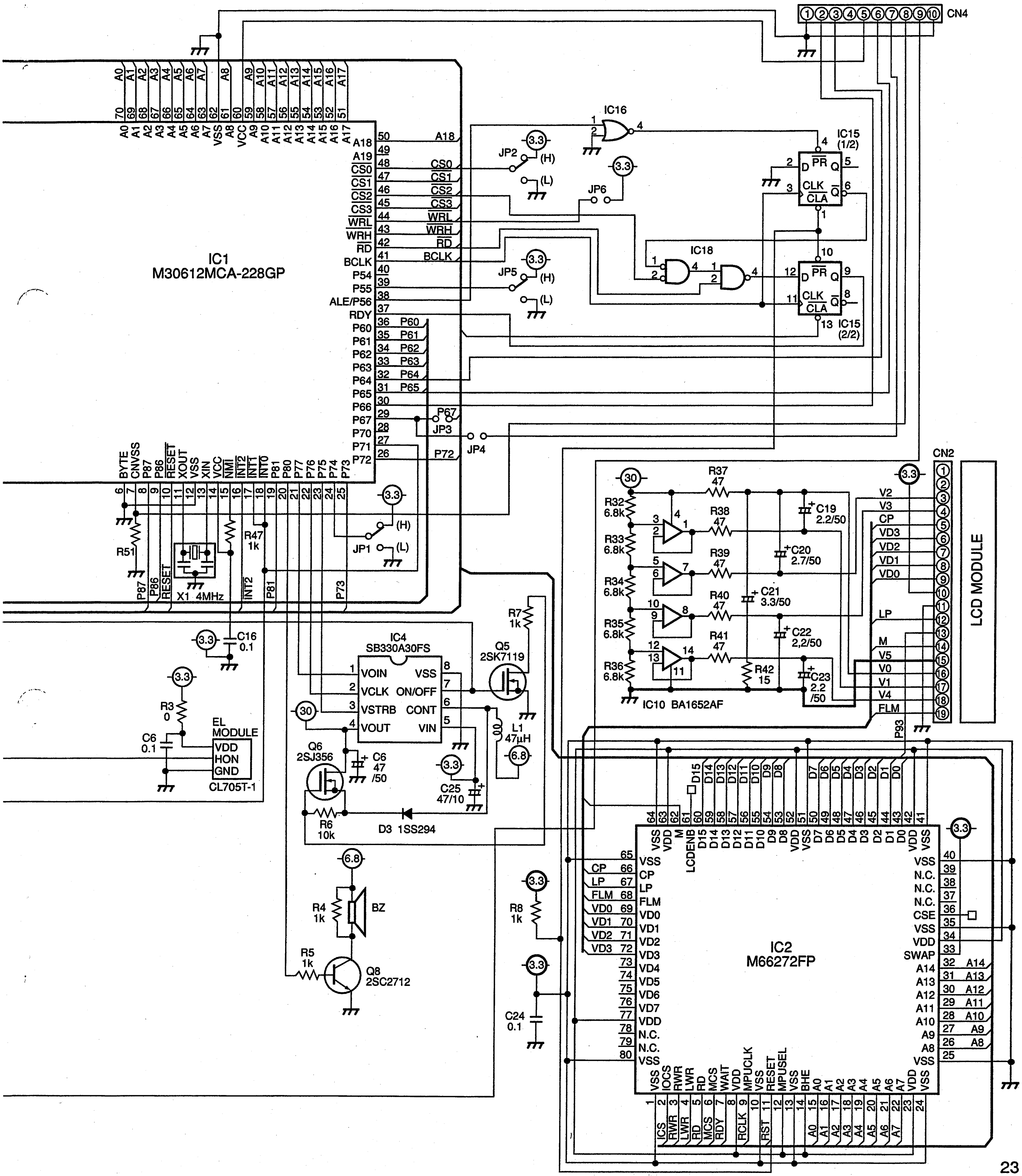
MODEL SWITCH

JP1	JP2	MODEL
H	H	J (JAPAN)
L	L	KU (NORTH AMERICA)
H	H	HY (EUROPE)

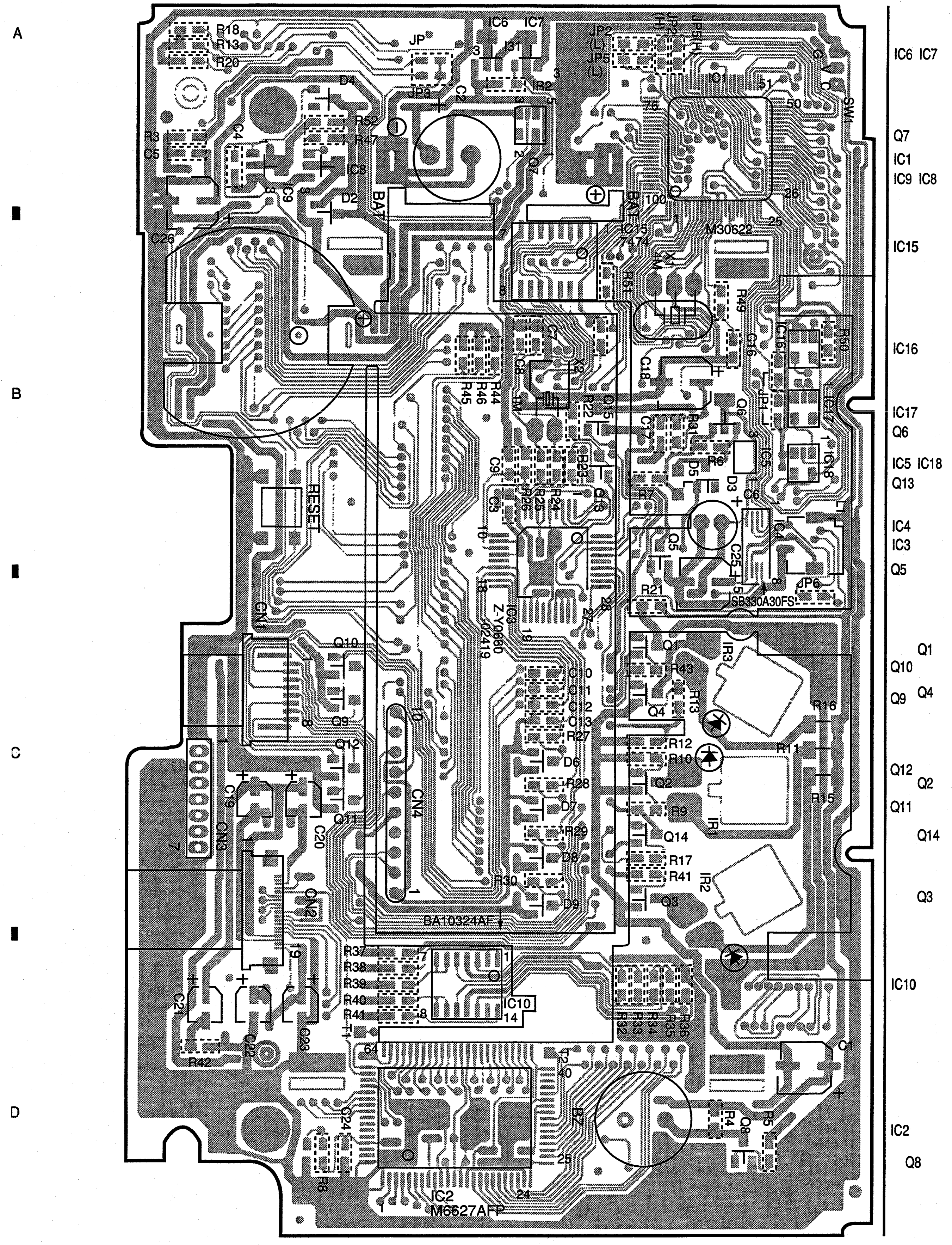
FLASH MODE SWITCH

MODE	JP3	JP4	JP5	JP6
NORMAL	EXIST	NONE	H	NONE
WRITING	NONE	EXIST	L	EXIST

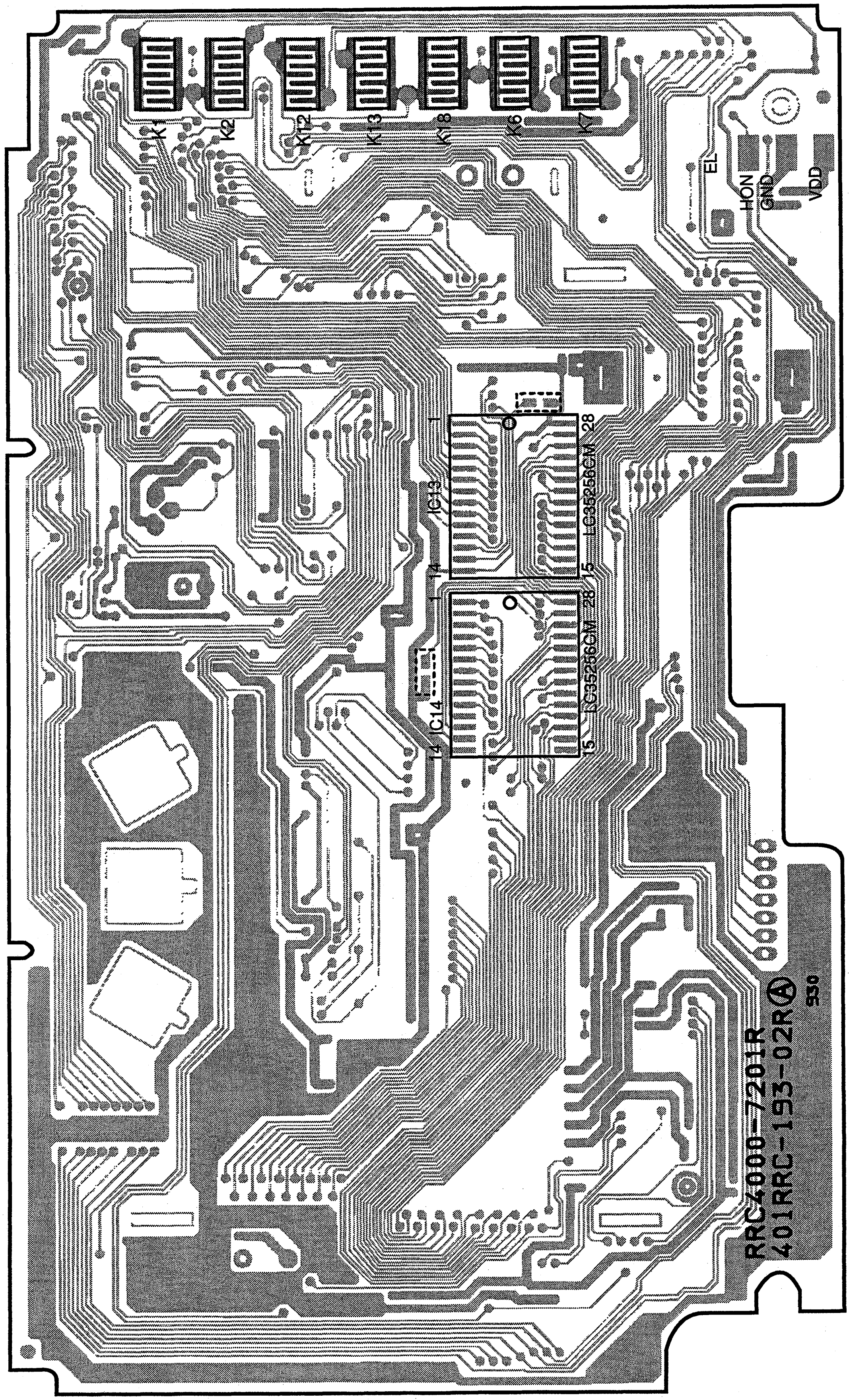
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".


CN4
IC16
IC15 (1/2)
IC15 (2/2)
IC18
JP2
JP6
JP5
JP3
JP4
JP1
IC1
M30612MCA-228GP
A18
A19
CS0
CS1
CS2
CS3
WRL
WRH
RD
BCLK
P54
P55
ALE/P56
RDY
P60
P61
P62
P63
P64
P65
P66
P67
P70
P71
P72
BYTE
CNVSS
P87
P86
RESET
XOUT
VSS
XIN
VCC
NMI
INT2
INT1
INT0
P81
P80
P77
P76
P75
P74
P73
R51
R47
1k
X1 4MHz
C16
0.1
R3
0
C6
0.1
EL MODULE
VDD
HON
GND
CL705T-1
IC4
SB330A30FS
VOIN
VCLK
VSTRB
VOUT
VSS
ON/OFF
CONT
VIN
Q5
2SK7119
R7
1k
L1
47µH
Q6
2SJ356
C6
47
/50
C25
47/10
R6
10k
D3 1SS294
R4
1k
BZ
R5
1k
Q8
2SC2712
R8
1k
C24
0.1
CN2
LCD MODULE
R37
47
R38
47
R39
47
R40
47
R41
47
R42
15
R32
6.8k
R33
6.8k
R34
6.8k
R35
6.8k
R36
6.8k
C19
2.2/50
C20
2.7/50
C21
3.3/50
C22
2,2/50
C23
2.2
/50
IC10 BA1652AF
V2
V3
CP
VD3
VD2
VD1
VD0
LP
M
V5
V0
V1
V4
FLM
P93
IC2
M66272FP
LCDENB
MPUCLK
MPUSEL
CSE
SWAP
N.C.
3.3
30
6.8
(H)
(L)

4.3 PCB DIAGRAM


A
B
C
D
IC6 IC7
Q7
IC1
IC9 IC8
IC15
IC16
IC17
Q6
IC5 IC18
Q13
IC4
IC3
Q5
Q1
Q10
Q9 Q4
Q12
Q2
Q11
Q14
Q3
IC10
IC2
Q8
M30622
IC15 7474
IC9 Z-Y0660 -02419
BA10324AF
SB330A30FS
IC2 M6627AFP
RESET
CN1
CN2
CN3
CN4
BAT
SW1
IR1
IR2
IR3

SIDE A

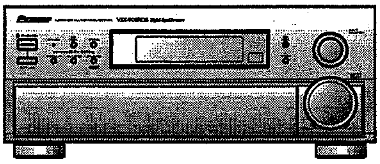

K1
K2
K12
K13
K18
K6
K7
EL
HON
GND
VDD
IC13
LC35256CM
1
14
15
28
IC14
LC35256CM
1
14
15
28
RRC4000-7201R
401RRC-193-02R Ⓐ
930

SIDE B

PION -05722

Service Manual

Pioneer



ORDER NO.
RRV2166

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-908RDS

VSX-908RDS-G

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	The voltage can be converted by the following method.
	VSX-908RDS	VSX-908RDS-G		
HY/EW	○	–	AC220-230V	AC240V, *
HY/GR	○	–	AC220-230V	AC240V, *
HV	○	–	AC230V	AC240V, *
HY	–	○	AC220-230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

CONTENTS

1. SAFETY INFORMATION ······ 2
2. EXPLODED VIEWS AND PARTS LIST ······ 3
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM ··· 10
4. PCB CONNECTION DIAGRAM ······ 48
5. PCB PARTS LIST ······ 71
6. ADJUSTMENT ······ 79
7. GENERAL INFORMATION ······ 80
   7.1 DISASSEMBLY ······ 80
   7.2 PARTS ······ 82
      7.2.1 IC ······ 82
      7.2.2 DISPLAY ······ 86
   7.3 REMOTE CONTROL UNIT ······ 88
8. PANEL FACILITIES AND SPECIFICATIONS ······ 93

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

©PIONEER CORPORATION 1999

T – ZZK JULY 1999

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

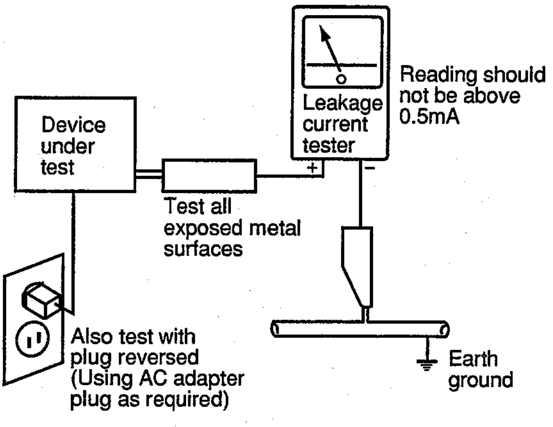
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

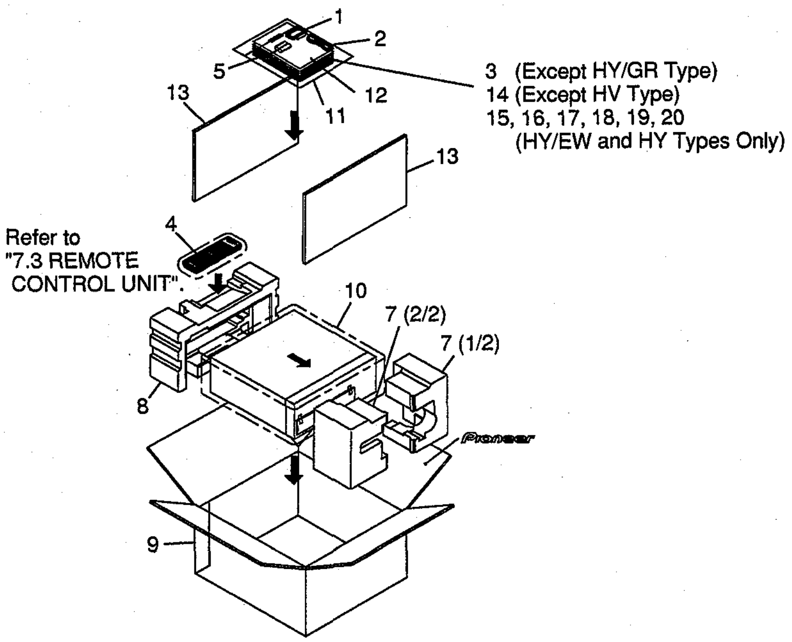
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



3 (Except HY/GR Type)
14 (Except HV Type)
15, 16, 17, 18, 19, 20
(HY/EW and HY Types Only)

Refer to "7.3 REMOTE CONTROL UNIT".

(1) PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	AM Loop Antenna	ATB7009
	2	FM Wire Antenna	ADH7010
	3	Operating Instructions(English)	See Contrast table (2)
	4	Remote Control Unit	See Contrast table (2)
NSP	5	Alkaline Dry Cell Battery (LR6, AA)	VEM1012
	6	•••••	
	7	Front Pad	AHA7253
	8	Rear Pad	AHA7254
	9	Packing Case	See Contrast table (2)
	10	Packing Sheet	RHC1023

Mark	No.	Description	Part No.
	11	Polyethylene Bag (0.03×230×340)	Z21-038
NSP	12	Warranty Card	ARY7022
	13	Spacer	AHB7032
	14	Operating Instructions	See Contrast table (2)
	15	Operating Instructions	See Contrast table (2)
	16	Operating Instructions	See Contrast table (2)
	17	Operating Instructions	See Contrast table (2)
	18	Operating Instructions	See Contrast table (2)
	19	Operating Instructions	See Contrast table (2)
	20	Operating Instructions	See Contrast table (2)

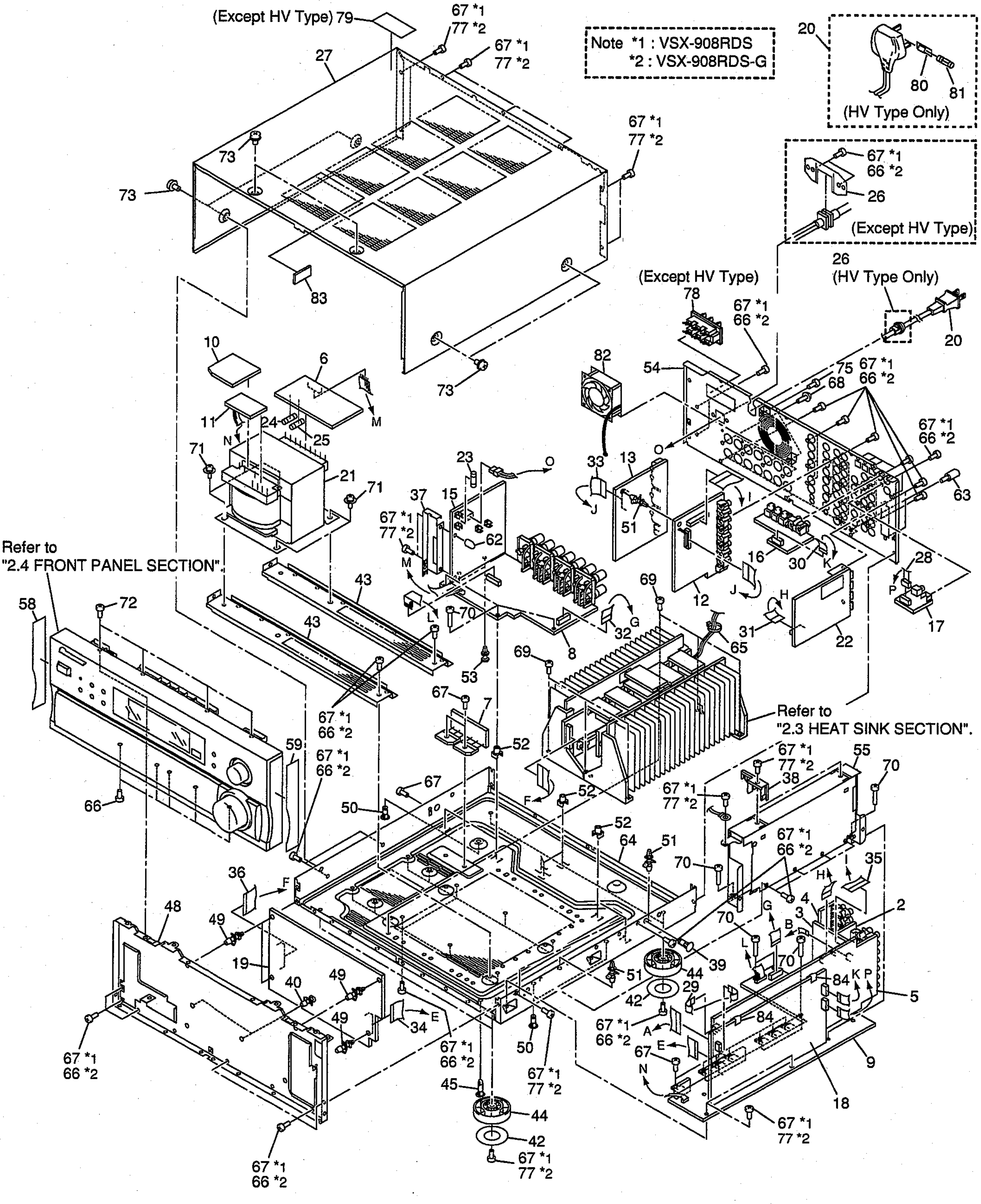
(2) CONTRAST TABLE

VSX-908RDS/HY/EW, HY/GR, HV and VSX-908RDS-G/HY are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			VSX-908RDS /HY/EW	VSX-908RDS /HY/GR	VSX-908RDS /HV	VSX-908RDS -G/HY	
	3	Operating Instructions (English)	ARB7187	Not used	ARB7187	ARB7187	
	4	Remote Control Unit (CU-VSX162)	AXD7214	AXD7214	AXD7214	Not used	
	4	Remote Control Unit (CU-VSX165)	Not used	Not used	Not used	AXD7236	
	9	Packing Case	AHD7814	AHD7814	AHD7814	AHD7815	
	14	Operating Instructions (German)	ARC7244	ARC7244	Not used	ARC7244	
	15	Operating Instructions (French)	ARC7245	Not used	Not used	ARC7245	
	16	Operating Instructions (Italian)	ARC7246	Not used	Not used	ARC7246	
	17	Operating Instructions (Dutch)	ARC7270	Not used	Not used	ARC7270	
	18	Operating Instructions (Swedish)	ARC7280	Not used	Not used	ARC7280	
	19	Operating Instructions (Spanish)	ARC7281	Not used	Not used	ARC7281	
	20	Operating Instructions (Portuguese)	ARC7282	Not used	Not used	ARC7282	

VSX-908RDS, VSX-908RDS-G

2.2 EXTERIOR



(Except HV Type) 79
67 *1
77 *2
Note *1 : VSX-908RDS
*2 : VSX-908RDS-G
20
80
81
(HV Type Only)
27
73
73
73
73
67 *1
66 *2
26
(Except HV Type)
83
(Except HV Type)
78
26
(HV Type Only)
20
10
6
82
54
75
68
11
24
25
M
N
71
21
71
23
O
33
13
O
63
37
15
62
J
51
I
16
30
K
28
P
17
Refer to
"2.4 FRONT PANEL SECTION".
58
72
43
43
L
70
8
32
G
69
12
J
H
31
65
22
53
69
7
52
Refer to
"2.3 HEAT SINK SECTION".
59
66
67
50
F
52
52
64
51
70
55
38
35
36
48
49
19
40
49
49
34
E
45
44
42
50
39
44
51
42
29
A
E
N
4
3
2
B
84
5
9
18

(1) EXTERIOR PARTS LIST

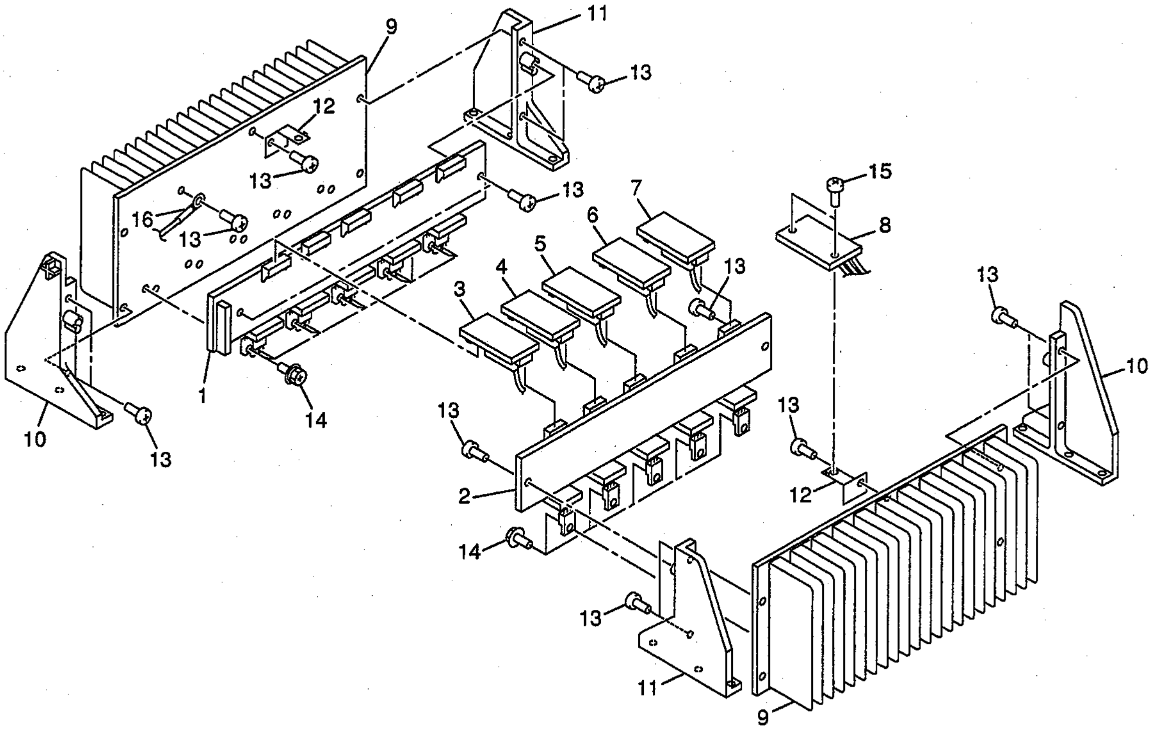
Mark	No.	Description	Part No.
	1	•••••	
NSP	2	EXTERNAL IN Assy	AWX7413
NSP	3	A-PINJACK Assy	AWX7412
	4	CONNECTION Assy	AWX7347
	5	MAIN CONTROL Assy	AWX7410
	6	TRANS 2-1 ASSY	AWX7403
	7	DIODE Assy	AWX7343
	8	SP/PS Assy	AWX7359
	9	REGULATOR Assy	AWX7310
	10	TRANS 1 Assy	AWX7316
	11	TRANS 2-2 Assy	AWX7518
	12	VIDEO Assy	AWX7422
	13	S-VIDEO Assy	AWX7395
	14	•••••	
	15	PRIMARY Assy	See Contrast table (2)
	16	DIGITAL-I/O Assy	AWX7396
NSP	17	RF TERMINAL Assy	AWX7376
	18	DSP Assy	AWX7272
	19	V-AMP Assy	AWX7309
⚠	20	AC Power Cord	See Contrast table (2)
⚠	21	Power Transformer (T1)	ATS7253
	22	FM/AM TUNER Unit	AXX7048
⚠	23	Fuse (FU1 : T4A)	AEK-514
⚠	24	Fuse (FU4 : T2A)	AEK-511
⚠	25	Fuse (FU5 : T2A)	AEK-511
	26	AC Cord Spacer	See Contrast table (2)
	27	Bonnet Case	See Contrast table (2)
	28	2P Shield with Housing (J24)	ADX7250
	29	Lead Card 07P (J13)	ADD7161
	30	Lead Card 11P AD (J22)	ADD7170
	31	Lead Card 13P AD (J16)	ADD7169
	32	Lead Card 14P (J17)	ADD7165
	33	Lead Card 21P (J18)	ADD7164
	34	Lead Card 23P BD SLD (J12)	ADD7160
	35	Lead Card 26P (J15)	ADD7163
	36	Lead Card 28P (J23)	ADD7171
	37	Assy Holder	ANG7121
	38	Assy Holder B	AMR7267
	39	Card Spacer	AEC7133
	40	Card Spacer	DEC1772
	41	•••••	
	42	Cushion 55	PNM1316
NSP	43	Frame 26	ANG7238
	44	Insulator	PNW2766
	45	Locking Card Spacer	DEC1908
	46	•••••	
	47	•••••	
NSP	48	Panel Stay 26	AND7031
	49	PC Support	VEC1549
NSP	50	PCB Holder	AEC7057
NSP	51	PCB Holder	PNW2100
NSP	52	PCB Mould	AMR1525
	53	PCB Spacer	AEC1372
	54	Rear Panel	See Contrast table (2)
	55	Shield Case	ANK7054
	56	•••••	
	57	•••••	
	58	Side Escutheon L	See Contrast table (2)
	59	Side Escutheon R	See Contrast table (2)
	60	•••••	
	61	•••••	
	62	Stud Cover	AEC7105
	63	Terminal Screw	AKE-031
NSP	64	Under Base 26	ANA7089
NSP	65	Binder (BK-1)	ZCA-BK1
	66	Screw	BBT30P080FCC
	67	Screw	BBZ30P080FZK
	68	Screw	ABA1193
	69	Screw	IBZ30P080FCC
	70	Screw	BBZ30P180FMC
	71	Screw	ABA1015
	72	Screw	See Contrast table (2)
	73	Screw	See Contrast table (2)
	74	Screw	BBZ30P060FCC
	75	Screw	IBZ30P100FCC
	76	Screw	BBT30P080FZK
	77	Screw	BBZ30P080FCC
⚠	78	AC Socket 3P	See Contrast table (2)
	79	Caution Label	See Contrast table (2)
	80	Fuse Holder	See Contrast table (2)
⚠	81	Fuse (T5A)	See Contrast table (2)
⚠	82	Fan Motor	AXM7012
NSP	83	Spacer	AEB1254
	84	Remo-con. Cushion	AEB7167

(2) CONTRAST TABLE

VSX-908RDS/HY/EW, HY/GR, HV and VSX-908RDS-G/HY are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			VSX-908RDS /HY/EW	VSX-908RDS /HY/GR	VSX-908RDS /HV	VSX-908RDS -G/HY	
	15	PRIMARY Assy	AWX7345	AWX7345	AWX7454	AWX7345	
⚠	20	AC Power Cord	ADG7029	ADG7029	VDG1063	ADG7029	
	26	AC Cord Spacer	ANG1153	ANG1153	Not used	ANG1153	
	26	Cord Stopper	Not used	Not used	CM-22B	Not used	
	27	Bonnet Case	AZN7808	AZN7808	AZN7808	AZN7809	
	54	Rear Panel	ANC7742	ANC7742	ANC7818	ANC7866	
	58	Side Escutheon L 98	AAK7660	AAK7660	AAK7660	Not used	
	58	Side Escutheon L D8	Not used	Not used	Not used	AAK7662	
	59	Side Escutheon R 98	AAK7661	AAK7661	AAK7661	Not used	
	59	Side Escutheon R D8	Not used	Not used	Not used	AAK7663	
	72	Screw	BBT30P100FZK	BBT30P100FZK	BBT30P100FZK	BBT30P100FCC	
	73	Screw	FBT40P080FZK	FBT40P080FZK	FBT40P080FZK	FBT40P080FNI	
⚠	78	AC Socket 3p	AKP-502	AKP-502	Not used	AKP-502	
	79	Caution Label	ARW7036	ARW7036	Not used	ARW7036	
	80	Fuse Holder	Not used	Not used	VKR1003	Not used	
⚠	81	Fuse (T5A)	Not used	Not used	PEK1003	Not used	

2.3 HEAT SINK SECTION



(1) HEAT SINK SECTION PARTS LIST

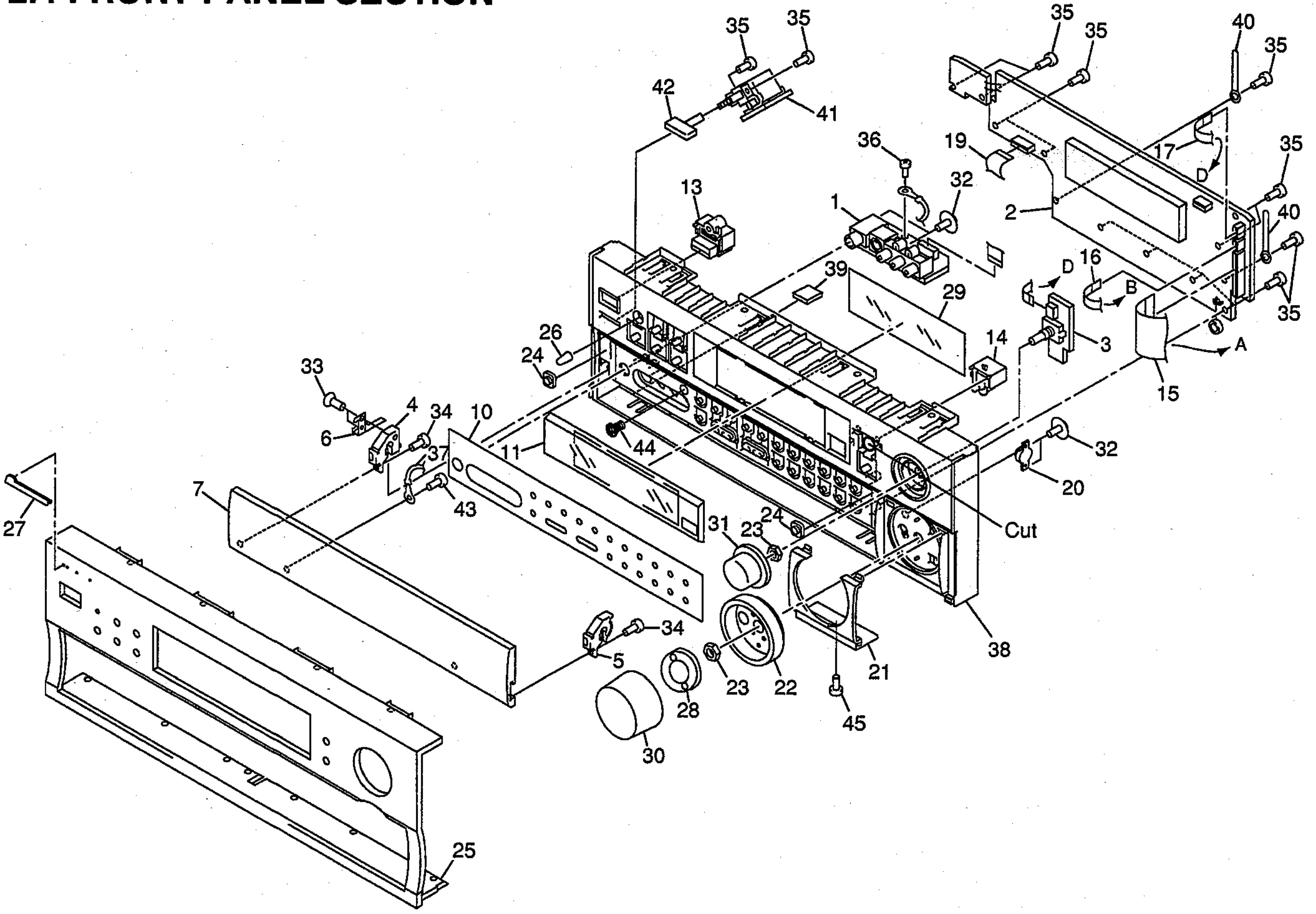
Mark	No.	Description	Part No.
	1	C-AMP N Assy	AWX7318
NSP	2	C-AMP-P Assy	AWX7317
NSP	3	OUTPUT-SL Assy	AWX7322
NSP	4	OUTPUT-FL Assy	AWX7319
	5	OUTPUT-C Assy	AWX7321
NSP	6	OUTPUT-FR Assy	AWX7320
NSP	7	OUTPUT-SR Assy	AWX7323
	8	VL-TERMINAL Assy	AWX7324
NSP	9	Heat Sink	ANH7102
	10	Heat Sink Holder B	AMR7256
	11	Heat Sink Holder A	AMR7255
NSP	12	Power Supply Plate	ANG7240
	13	Screw	See Contrast table (2)
	14	Screw	ABA1082
	15	Screw	IBZ30P080FCC
⚠	16	Thermistor	AEX7004

(2) CONTRAST TABLE

VSX-908RDS/HY/EW, HY/GR, HV and VSX-908RDS-G/HY are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			VSX-908RDS /HY/EW	VSX-908RDS /HY/GR	VSX-908RDS /HV	VSX-908RDS -G/HY	
	13	Screw	BBZ30P080FZK	BBZ30P080FZK	BBZ30P080FZK	BBZ30P080FCC	

2.4 FRONT PANEL SECTION



(1) FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	H. PHONE/F. VIDEO Assy	AWX7342
	2	DISPLAY Assy	AWX7414
NSP	3	ROTARY ENCODER Assy	AWX7405
	4	Door Hinge L	See Contrast table (2)
	5	Door Hinge R	See Contrast table (2)
NSP	6	Magnet Angle	ANG7241
	7	Door Panel	See Contrast table (2)
	8	•••••	
	9	•••••	
	10	Door Sheet	See Contrast table (2)
	11	Display Panel	See Contrast table (2)
	12	•••••	
	13	Power Button (STANDBY/ON)	See Contrast table (2)
	14	MR Button (MULTIROOM)	See Contrast table (2)
	15	Lead Card 32P (J11)	ADD7159
	16	Lead Card 05P (J14)	ADD7162
	17	Lead Card 06P (J20)	ADD7167
	18	•••••	
	19	Lead Card 12P (J21)	ADD7166
	20	Damper Assy (60)	AXA7076
	21	Sub Panel	See Contrast table (2)
	22	Volume Ring	See Contrast table (2)
	23	Nut	NK90FUC
	24	Door Cusion	See Contrast table (2)
	25	Front Panel	See Contrast table (2)
	26	LED Lens	PNW2019
	27	Name Plate	See Contrast table (2)
	28	Ring Spacer D5	AWL7038
	29	FL Sheet D10	AAK7629
	30	Volume Knob (MASTER VOLUME)	See Contrast table (2)
	31	Rotary Knob (INPUT SELECTOR)	See Contrast table (2)
	32	Screw	ABA7053
	33	Screw	PBA1096
	34	Screw	BBZ30P060FCC
	35	Screw	BPZ30P080FMC
	36	Screw	See Contrast table (2)
NSP	37	Cord with Plug	ADH7020
	38	Panel Base	See Contrast table (2)
	39	Magnet	AMF7002
	40	Cord Clamper	RNH-184
	41	P-SW Assy	AWX7330
	42	Power Button MG	See Contrast table (2)
	43	Screw	See Contrast table (2)
	44	GND Spring	ABH7172
	45	Screw	See Contrast table (2)

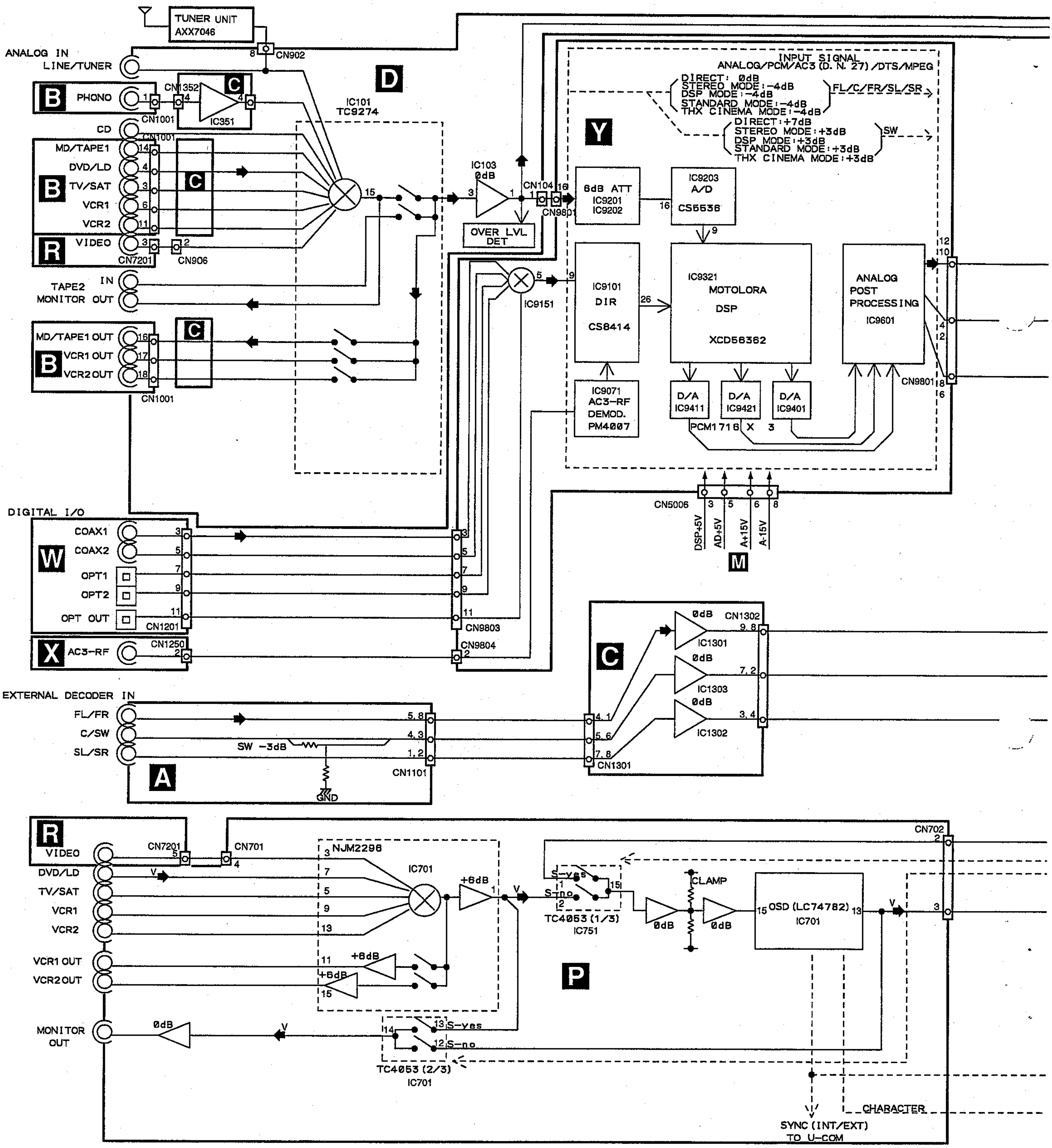
(2) CONTRAST TABLE

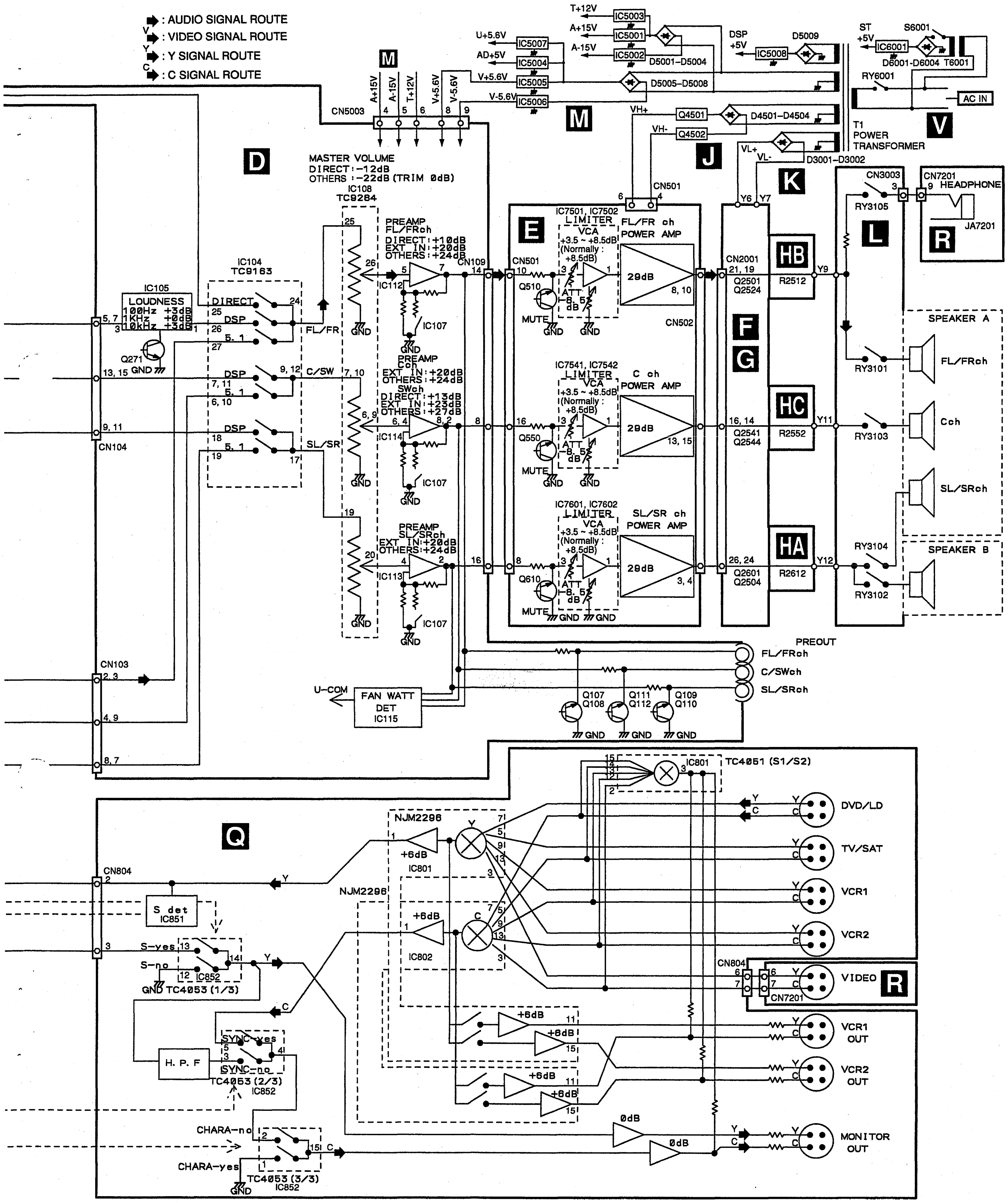
VSX-908RDS/HY/EW, HY/GR, HV and VSX-908RDS-G/HY are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			VSX-908RDS /HY/EW	VSX-908RDS /HY/GR	VSX-908RDS /HV	VSX-908RDS -G/HY	
	4	Door Hinge 26 L	AMR7252	AMR7252	AMR7252	Not used	
	4	Door Hinge D10 L	Not used	Not used	Not used	AMR7250	
	5	Door Hinge 26 R	AMR7253	AMR7253	AMR7253	Not used	
	5	Door Hinge D10 R	Not used	Not used	Not used	AMR7251	
	7	Door Panel 98	ANB7199	ANB7199	ANB7199	Not used	
	7	Door Panel E07	Not used	Not used	Not used	ANB7175	
	10	Door Sheet 98R	AAK7664	AAK7664	AAK7664	Not used	
	10	Door Sheet 98RG	Not used	Not used	Not used	AAH7057	
	11	Display Panel SD	AAK7630	AAK7630	AAK7630	Not used	
	11	Display Panel SDG	Not used	Not used	Not used	AAK7631	
	13	Power Button	AAD7440	AAD7440	AAD7440	Not used	
	13	Power Button G	Not used	Not used	Not used	AAD7485	
	14	MR Button 26	AAD7514	AAD7514	AAD7514	Not used	
	14	MR Button G	Not used	Not used	Not used	AAD7541	
	21	Sub Panel 98	ANB7200	ANB7200	ANB7200	Not used	
	21	Sub Panel D8	Not used	Not used	Not used	ANB7207	
	22	Volume Ring 98	AAH7028	AAH7028	AAH7028	Not used	
	22	Volume Ring D10	Not used	Not used	Not used	AAH7016	
	24	Door Cusion B	AEB7152	AEB7152	AEB7152	Not used	
	24	Door Cusion G	Not used	Not used	Not used	AEB7153	
	25	Front Panel 908	ANB7173	ANB7173	ANB7173	Not used	
	25	Front Panel 98RG	Not used	Not used	Not used	ANB7176	
	27	Name Plate B	PAN1376	PAN1376	PAN1376	Not used	
	27	Name Plate G	Not used	Not used	Not used	PAN1377	
	30	Volume Knob 98	AAB7199	AAB7199	AAB7199	Not used	
	30	Volume Knob 98HL	Not used	Not used	Not used	AAB7210	
	31	Rotary Knob 29	AAB7221	AAB7221	AAB7221	Not used	
	31	Rotary Knob E07	Not used	Not used	Not used	AAB7209	
	36	Screw	BBZ30P080FZK	BBZ30P080FZK	BBZ30P080FZK	BBZ30P080FCC	
	38	Panel Base 98	AMB7637	AMB7637	AMB7637	Not used	
	38	Panel Base D8	Not used	Not used	Not used	AMB7572	
	42	Power Button M	AAD7442	AAD7442	AAD7442	Not used	
	42	Power Button MG	Not used	Not used	Not used	AAD7491	
	43	Screw	BBZ30P050FZK	BBZ30P050FZK	BBZ30P050FZK	BBZ30P050FMC	
	45	Screw	BBT30P080FZK	BBT30P080FZK	BBT30P080FZK	BBT30P080FCC	

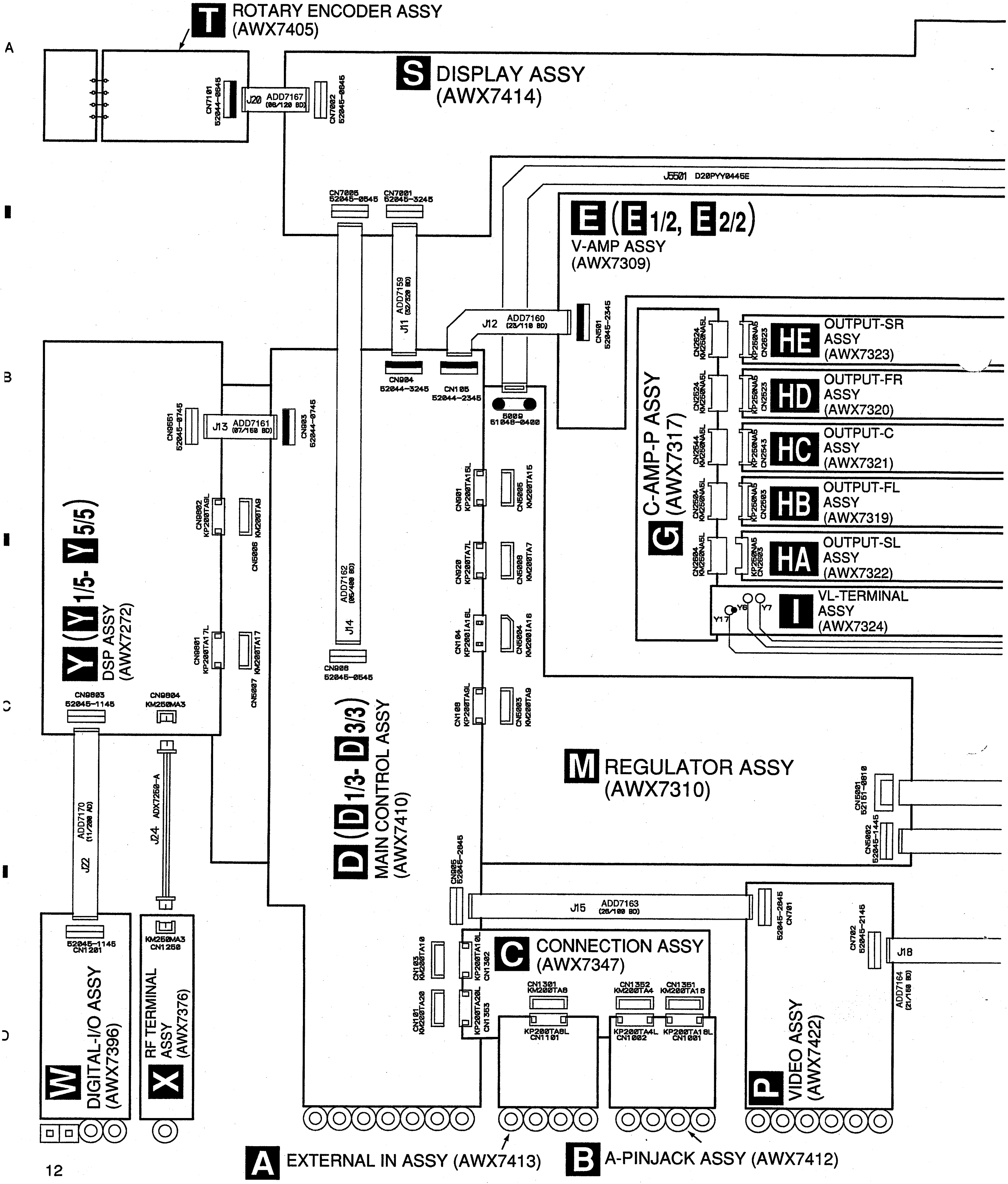
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM


TUNER UNIT
AXX7046
ANALOG IN
LINE/TUNER
CN902
D
B
PHONO
CN1352
C
IC351
CN1001
IC101
TC9274
CD
MD/TAPE1
DVD/LD
TV/SAT
VCR1
VCR2
VIDEO
R
CN7201
CN906
TAPE2
MONITOR
IN
OUT
IC103
0dB
OVER LVL DET
CN104
CN9801
MD/TAPE1 OUT
VCR1 OUT
VCR2 OUT
INPUT SIGNAL
ANALOG/PCM/AC3 (D. N. 27) /DTS/MPEG
DIRECT: 0dB
STEREO MODE: -4dB
DSP MODE: -4dB
STANDARD MODE: -4dB
THX CINEMA MODE: -4dB
FL/C/FR/SL/SR
DIRECT: +7dB
STEREO MODE: +3dB
DSP MODE: +3dB
STANDARD MODE: +3dB
THX CINEMA MODE: +3dB
SW
Y
6dB ATT
IC9201
IC9202
IC9203
A/D
CS5536
IC9151
IC9101
DIR
CS8414
IC9321
MOTOLORA
DSP
XCD56362
ANALOG POST PROCESSING
IC9601
IC9071
AC3-RF
DEMOD.
PM4007
D/A
IC9411
D/A
IC9421
D/A
IC9401
PCM1716 X 3
CN5006
DSP+5V
AD+5V
A+15V
A-15V
M
DIGITAL I/O
COAX1
COAX2
W
OPT1
OPT2
OPT OUT
CN1201
CN9803
X
AC3-RF
CN1250
CN9804
C
0dB
CN1302
IC1301
0dB
IC1303
0dB
IC1302
EXTERNAL DECODER IN
FL/FR
C/SW
SL/SR
SW -3dB
A
GND
CN1101
CN1301
R
VIDEO
CN7201
CN701
DVD/LD
TV/SAT
VCR1
VCR2
VCR1 OUT
VCR2 OUT
NJM2296
IC701
+6dB
+6dB
+6dB
P
MONITOR OUT
0dB
S-yes
S-no
TC4053 (1/3)
IC751
0dB
CLAMP
0dB
OSD (LC74782)
IC701
CN702
TC4053 (2/3)
IC701
SYNC (INT/EXT)
TO U-COM
CHARACTER

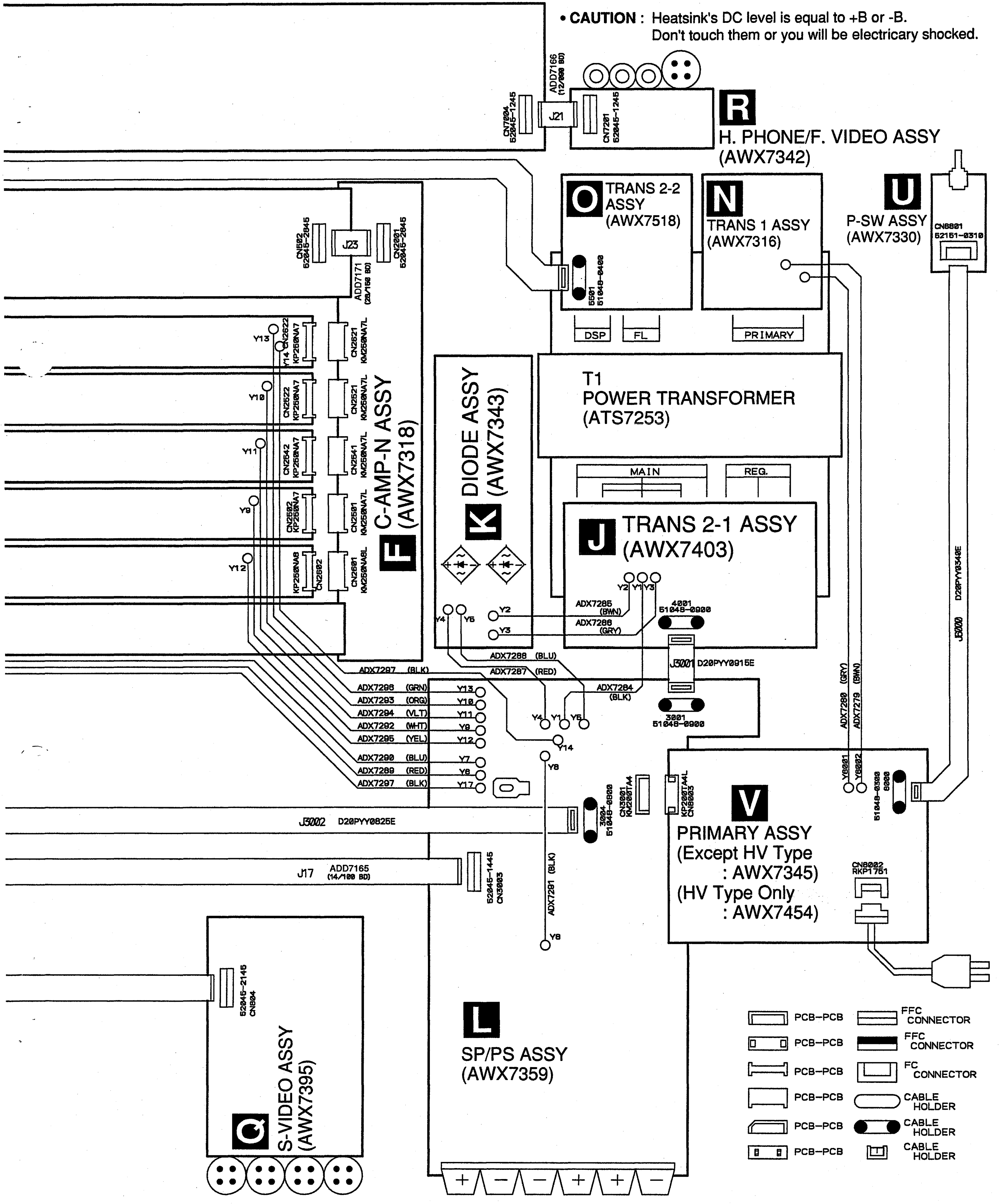

: AUDIO SIGNAL ROUTE
V : VIDEO SIGNAL ROUTE
Y : Y SIGNAL ROUTE
C : C SIGNAL ROUTE
M
D
E
F
G
HB
HC
HA
J
K
L
R
V
Q
T+12V
A+15V
A-15V
U+5.6V
AD+5V
V+5.6V
V-5.6V
IC5003
IC5001
IC5002
IC5007
IC5004
IC5005
IC5006
D5001-D5004
D5005-D5008
DSP +5V
IC5008
D5009
ST +5V
IC6001
S6001
D6001-D6004
T6001
RY6001
AC IN
VH+
VH-
Q4501
Q4502
D4501-D4504
VL+
VL-
D3001-D3002
T1 POWER TRANSFORMER
CN5003
MASTER VOLUME
DIRECT : -12dB
OTHERS : -22dB (TRIM 0dB)
IC108
TC9284
IC105
LOUDNESS
100Hz +3dB
1KHz +0dB
10kHz +3dB
Q271
GND
IC104
TC9163
DIRECT
DSP
5. 1
FL/FR
C/SW
SL/SR
CN104
PREAMP FL/FRch
DIRECT : +10dB
EXT IN : +20dB
OTHERS : +24dB
PREAMP Cch
EXT IN : +20dB
OTHERS : +24dB
SWch
DIRECT : +13dB
EXT IN : +23dB
OTHERS : +27dB
PREAMP SL/SRch
EXT IN : +20dB
OTHERS : +24dB
IC112
IC114
IC113
IC107
CN109
CN501
Q510
Q550
Q610
MUTE
IC7501, IC7502
IC7541, IC7542
IC7601, IC7602
LIMITER
VCA
+3.5 ~ +8.5dB
(Normally : +8.5dB)
ATT -8.5dB
FL/FR ch POWER AMP
C ch POWER AMP
SL/SR ch POWER AMP
29dB
CN502
CN2001
Q2501
Q2524
Q2541
Q2544
Q2601
Q2504
R2512
R2552
R2612
Y6
Y7
Y9
Y11
Y12
CN3003
CN7201
HEADPHONE
JA7201
RY3105
RY3101
RY3103
RY3104
RY3102
SPEAKER A
SPEAKER B
FL/FRch
Cch
SL/SRch
PREOUT
FL/FRch
C/SWch
SL/SRch
Q107
Q108
Q111
Q112
Q109
Q110
U-COM
FAN WATT DET
IC115
CN103
IC801
TC4051 (S1/S2)
NJM2296
+6dB
IC802
DVD/LD
TV/SAT
VCR1
VCR2
VIDEO
CN804
CN7201
VCR1 OUT
VCR2 OUT
MONITOR OUT
0dB
S det
IC851
S-yes
S-no
TC4053 (1/3)
IC852
H. P. F
SYNC-yes
SYNC-no
TC4053 (2/3)
CHARA-no
CHARA-yes
TC4053 (3/3)

3.2 OVERALL WIRING CONNECTION DIAGRAM

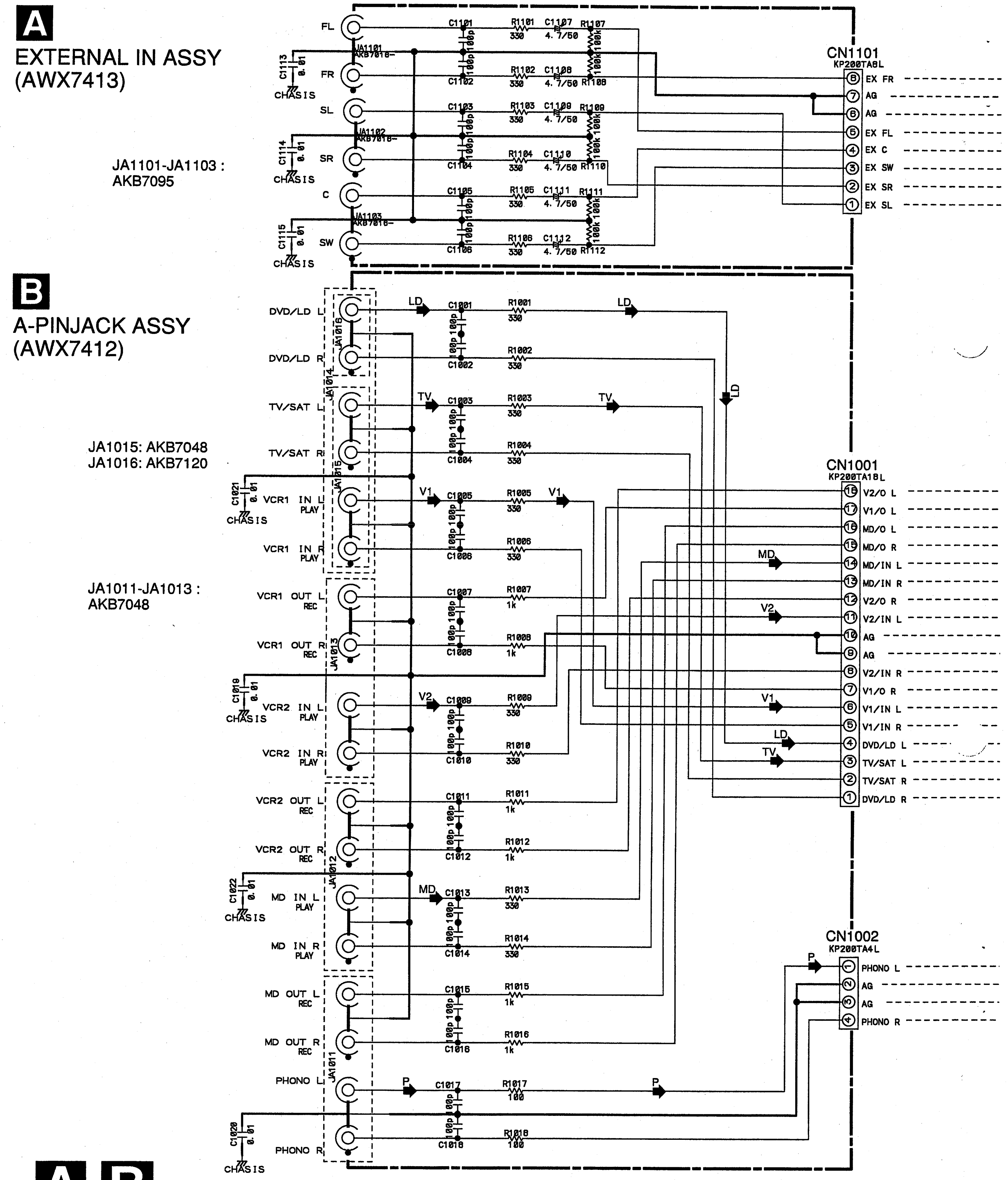

T ROTARY ENCODER ASSY (AWX7405)
CN7101 52044-0645
J20 ADD7167 (06/120 BD)
CN7002 52045-0645
S DISPLAY ASSY (AWX7414)
CN7005 52045-0545
CN7001 52045-3245
J5501 D20PYY0445E
E (E 1/2, E 2/2) V-AMP ASSY (AWX7309)
ADD7159 (32/320 BD) J11
J12 ADD7160 (23/110 BD)
CN501 52045-2345
CN904 52044-3245
CN105 52044-2345
5009 51048-0400
G C-AMP-P ASSY (AWX7317)
CN2624 KM250NA5L
KP250NA5 CN2623
HE OUTPUT-SR ASSY (AWX7323)
CN2524 KM250NA5L
KP250NA5 CN2523
HD OUTPUT-FR ASSY (AWX7320)
CN2544 KM250NA5L
KP250NA5 CN2543
HC OUTPUT-C ASSY (AWX7321)
CN2504 KM250NA5L
KP250NA5 CN2503
HB OUTPUT-FL ASSY (AWX7319)
CN2604 KM250NA5L
KP250NA5 CN2603
HA OUTPUT-SL ASSY (AWX7322)
Y17 Y6 Y7
I VL-TERMINAL ASSY (AWX7324)
CN9551 52045-0745
J13 ADD7161 (07/150 BD)
CN903 52044-0745
Y (Y 1/5- Y 5/5) DSP ASSY (AWX7272)
CN9802 KP200TA9L
CN5006 KM200TA9
CN9801 KP200TA17L
CN5007 KM200TA17
CN9803 52045-1145
CN9804 KM250MA3
ADD7162 (05/400 BD) J14
CN908 52045-0545
CN901 KP200TA15L
CN5005 KM200TA15
CN920 KP200TA7L
CN5008 KM200TA7
CN104 KP200IA16L
CN5004 KM200IA16
CN108 KP200TA9L
CN5003 KM200TA9
D (D 1/3- D 3/3) MAIN CONTROL ASSY (AWX7410)
M REGULATOR ASSY (AWX7310)
CN5001 52151-0810
CN5002 52045-1445
ADD7170 (11/200 AD) J22
J24 ADX7250-A
CN905 52045-2845
J15 ADD7163 (28/100 BD)
52045-2845 CN701
CN702 52045-2145
J18
ADD7164 (21/150 BD)
52045-1145 CN1201
KM250MA3 CN1250
W DIGITAL-I/O ASSY (AWX7396)
X RF TERMINAL ASSY (AWX7376)
CN103 KM200TA10
CN101 KM200TA20
KP200TA10L CN1302
KP200TA20L CN1303
C CONNECTION ASSY (AWX7347)
CN1301 KM200TA8
CN1352 KM200TA4
CN1351 KM200TA18
KP200TA8L CN1101
KP200TA4L CN1002
KP200TA18L CN1001
P VIDEO ASSY (AWX7422)
A EXTERNAL IN ASSY (AWX7413)
B A-PINJACK ASSY (AWX7412)
1 2 3 4
A B C D

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

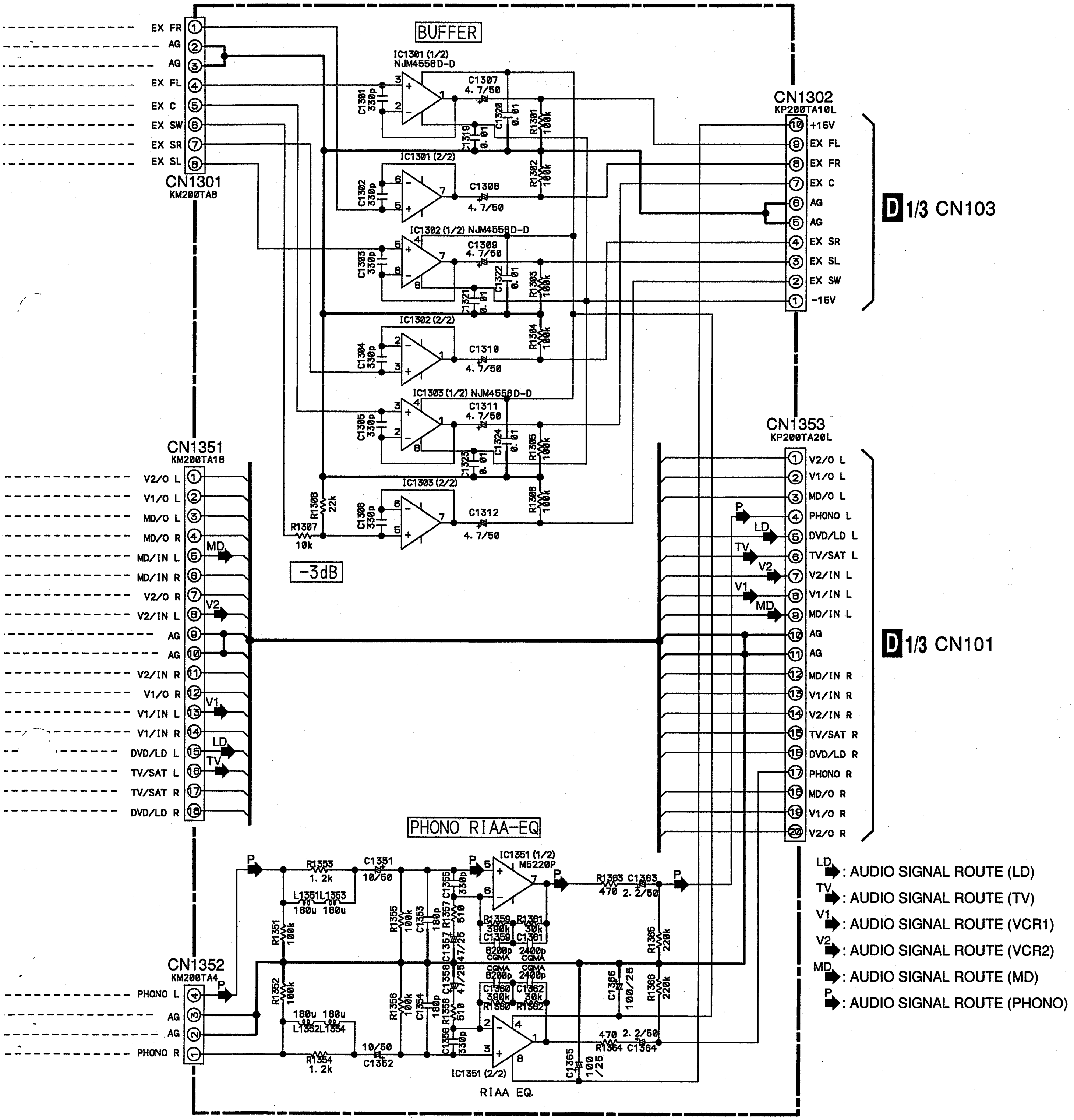
- **CAUTION :** Heatsink's DC level is equal to +B or -B.
Don't touch them or you will be electricary shocked.


R
H. PHONE/F. VIDEO ASSY
(AWX7342)
CN7004 52045-1245
J21
ADD7166 (12/080 BD)
CN7201 52045-1245
O
TRANS 2-2 ASSY
(AWX7518)
5501 51048-0400
N
TRANS 1 ASSY
(AWX7316)
U
P-SW ASSY
(AWX7330)
CN6801 52151-0310
DSP
FL
PRIMARY
F
C-AMP-N ASSY
(AWX7318)
CN502 52045-2845
J23
CN2001 52045-2845
ADD7171 (28/150 BD)
CN2622 KP250NA7
CN2621 KM250NA7L
CN2522 KP250NA7
CN2521 KM250NA7L
CN2542 KP250NA7
CN2541 KM250NA7L
CN2502 KP250NA7
CN2501 KM250NA7L
CN2602 KP250NA8
CN2601 KM250NA8L
Y13
Y14
Y10
Y11
Y9
Y12
K
DIODE ASSY
(AWX7343)
T1
POWER TRANSFORMER
(ATS7253)
MAIN
REG.
J
TRANS 2-1 ASSY
(AWX7403)
Y2 Y1 Y3
ADX7285 (BWN)
ADX7286 (GRY)
4001 51048-0900
J3001 D20PYY0915E
3001 51048-0900
Y4 Y5
ADX7288 (BLU)
ADX7287 (RED)
ADX7297 (BLK)
ADX7284 (BLK)
ADX7298 (GRN)
ADX7293 (ORG)
ADX7294 (VLT)
ADX7292 (WHT)
ADX7295 (YEL)
ADX7290 (BLU)
ADX7289 (RED)
ADX7297 (BLK)
Y13
Y10
Y11
Y9
Y12
Y7
Y6
Y17
Y4 Y1 Y5
Y14
Y8
J3002 D20PYY0825E
3004 51048-0800
CN3001 KM200TA4
J17
ADD7165 (14/100 BD)
52045-1445 CN3003
ADX7281 (BLK)
Y8
ADX7280 (GRY)
ADX7279 (BWN)
J6000 D20PYY0340E
V
PRIMARY ASSY
(Except HV Type
: AWX7345)
(HV Type Only
: AWX7454)
KP200TA4L CN8003
Y8001 Y8002
51048-0300 8000
CN8002 RKP1751
52045-2145 CN804
Q
S-VIDEO ASSY
(AWX7395)
L
SP/PS ASSY
(AWX7359)
+ − − + + −
PCB−PCB
PCB−PCB
PCB−PCB
PCB−PCB
PCB−PCB
PCB−PCB
FFC CONNECTOR
FFC CONNECTOR
FC CONNECTOR
CABLE HOLDER
CABLE HOLDER
CABLE HOLDER
A
B
C
D

3.3 EXTERNAL IN, A-PINJACK and CONNECTION ASSYS


A
EXTERNAL IN ASSY
(AWX7413)
JA1101-JA1103 :
AKB7095
FL
FR
SL
SR
C
SW
JA1101 AKB7018-
JA1102 AKB7018-
JA1103 AKB7018-
C1113 0.01
C1114 0.01
C1115 0.01
CHASSIS
C1101 C1102 C1103 C1104 C1105 C1106 100p
R1101 R1102 R1103 R1104 R1105 R1106 330
C1107 C1108 C1109 C1110 C1111 C1112 4.7/50
R1107 R1108 R1109 R1110 R1111 R1112 100k
CN1101
KP200TA8L
8 EX FR
7 AG
6 AG
5 EX FL
4 EX C
3 EX SW
2 EX SR
1 EX SL
B
A-PINJACK ASSY
(AWX7412)
JA1015: AKB7048
JA1016: AKB7120
JA1011-JA1013 :
AKB7048
DVD/LD L
DVD/LD R
TV/SAT L
TV/SAT R
VCR1 IN L PLAY
VCR1 IN R PLAY
VCR1 OUT L REC
VCR1 OUT R REC
VCR2 IN L PLAY
VCR2 IN R PLAY
VCR2 OUT L REC
VCR2 OUT R REC
MD IN L PLAY
MD IN R PLAY
MD OUT L REC
MD OUT R REC
PHONO L
PHONO R
JA1016 JA1014 JA1015 JA1013 JA1012 JA1011
C1021 0.01
C1019 0.01
C1022 0.01
C1020 0.01
CHASSIS
LD TV V1 V2 MD P
C1001 C1002 C1003 C1004 C1005 C1006 C1007 C1008 C1009 C1010 C1011 C1012 C1013 C1014 C1015 C1016 C1017 C1018 100p
R1001 R1002 R1003 R1004 R1005 R1006 R1009 R1010 R1013 R1014 330
R1007 R1008 R1011 R1012 R1015 R1016 1k
R1017 R1018 100
CN1001
KP200TA18L
18 V2/O L
17 V1/O L
16 MD/O L
15 MD/O R
14 MD/IN L
13 MD/IN R
12 V2/O R
11 V2/IN L
10 AG
9 AG
8 V2/IN R
7 V1/O R
6 V1/IN L
5 V1/IN R
4 DVD/LD L
3 TV/SAT L
2 TV/SAT R
1 DVD/LD R
CN1002
KP200TA4L
1 PHONO L
2 AG
3 AG
4 PHONO R

C CONNECTION ASSY (AWX7347)


BUFFER
-3dB
PHONO RIAA-EQ
RIAA EQ.
CN1301
KM200TA8
EX FR ①
AG ②
AG ③
EX FL ④
EX C ⑤
EX SW ⑥
EX SR ⑦
EX SL ⑧
IC1301 (1/2) NJM4558D-D
IC1301 (2/2)
IC1302 (1/2) NJM4558D-D
IC1302 (2/2)
IC1303 (1/2) NJM4558D-D
IC1303 (2/2)
C1301 330p
C1302 330p
C1303 330p
C1304 330p
C1305 330p
C1306 330p
C1307 4.7/50
C1308 4.7/50
C1309 4.7/50
C1310 4.7/50
C1311 4.7/50
C1312 4.7/50
C1319 0.01
C1320 0.01
C1321 0.01
C1322 0.01
C1323 0.01
C1324 0.01
R1301 100k
R1302 100k
R1303 100k
R1304 100k
R1305 100k
R1306 100k
R1307 10k
R1308 22k
CN1302
KP200TA10L
⑩ +15V
⑨ EX FL
⑧ EX FR
⑦ EX C
⑥ AG
⑤ AG
④ EX SR
③ EX SL
② EX SW
① -15V
D 1/3 CN103
CN1351
KM200TA18
V2/O L ①
V1/O L ②
MD/O L ③
MD/O R ④
MD/IN L ⑤
MD/IN R ⑥
V2/O R ⑦
V2/IN L ⑧
AG ⑨
AG ⑩
V2/IN R ⑪
V1/O R ⑫
V1/IN L ⑬
V1/IN R ⑭
DVD/LD L ⑮
TV/SAT L ⑯
TV/SAT R ⑰
DVD/LD R ⑱
MD
V2
V1
LD
TV
P
CN1353
KP200TA20L
① V2/O L
② V1/O L
③ MD/O L
④ PHONO L
⑤ DVD/LD L
⑥ TV/SAT L
⑦ V2/IN L
⑧ V1/IN L
⑨ MD/IN L
⑩ AG
⑪ AG
⑫ MD/IN R
⑬ V1/IN R
⑭ V2/IN R
⑮ TV/SAT R
⑯ DVD/LD R
⑰ PHONO R
⑱ MD/O R
⑲ V1/O R
⑳ V2/O R
D 1/3 CN101
CN1352
KM200TA4
PHONO L ④
AG ③
AG ②
PHONO R ①
IC1351 (1/2) M5220P
IC1351 (2/2)
R1351 100k
R1352 100k
R1353 1.2k
R1354 1.2k
R1355 100k
R1356 100k
R1357 510
R1358 510
R1359 390k
R1360 390k
R1361 30k
R1362 30k
R1363 470
R1364 470
R1365 220k
R1366 220k
C1351 10/50
C1352 10/50
C1353 180p
C1354 180p
C1355 330p
C1356 330p
C1357 47/25
C1358 47/25
C1359 8200p CQMA
C1360 8200p CQMA
C1361 2400p CQMA
C1362 2400p CQMA
C1363 2.2/50
C1364 2.2/50
C1365 100/25
C1366 100/25
L1351 180u
L1352 180u
L1353 180u
L1354 180u

LD ➡ : AUDIO SIGNAL ROUTE (LD)

TV ➡ : AUDIO SIGNAL ROUTE (TV)

V1 ➡ : AUDIO SIGNAL ROUTE (VCR1)

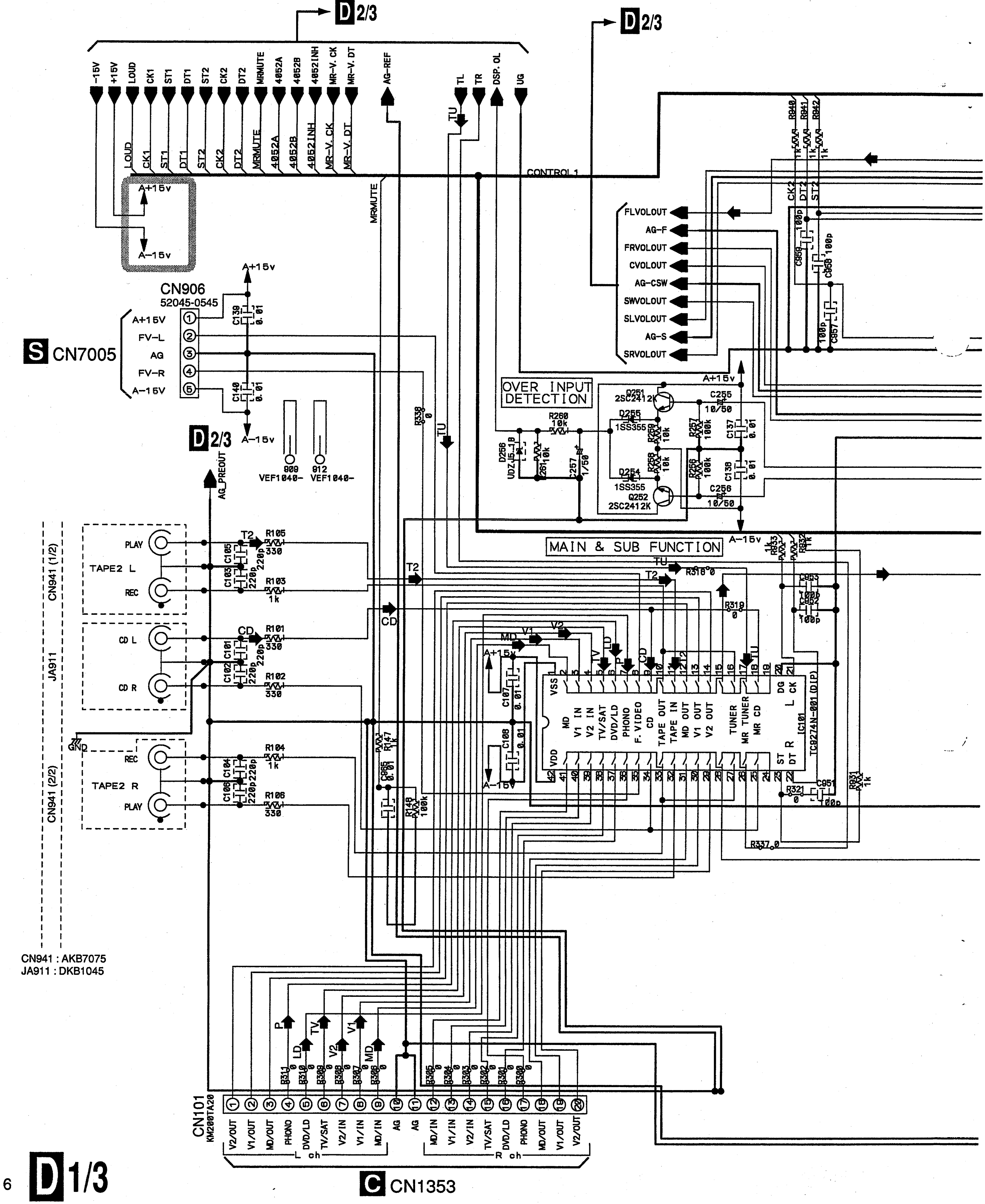
V2 ➡ : AUDIO SIGNAL ROUTE (VCR2)

MD ➡ : AUDIO SIGNAL ROUTE (MD)

P ➡ : AUDIO SIGNAL ROUTE (PHONO)

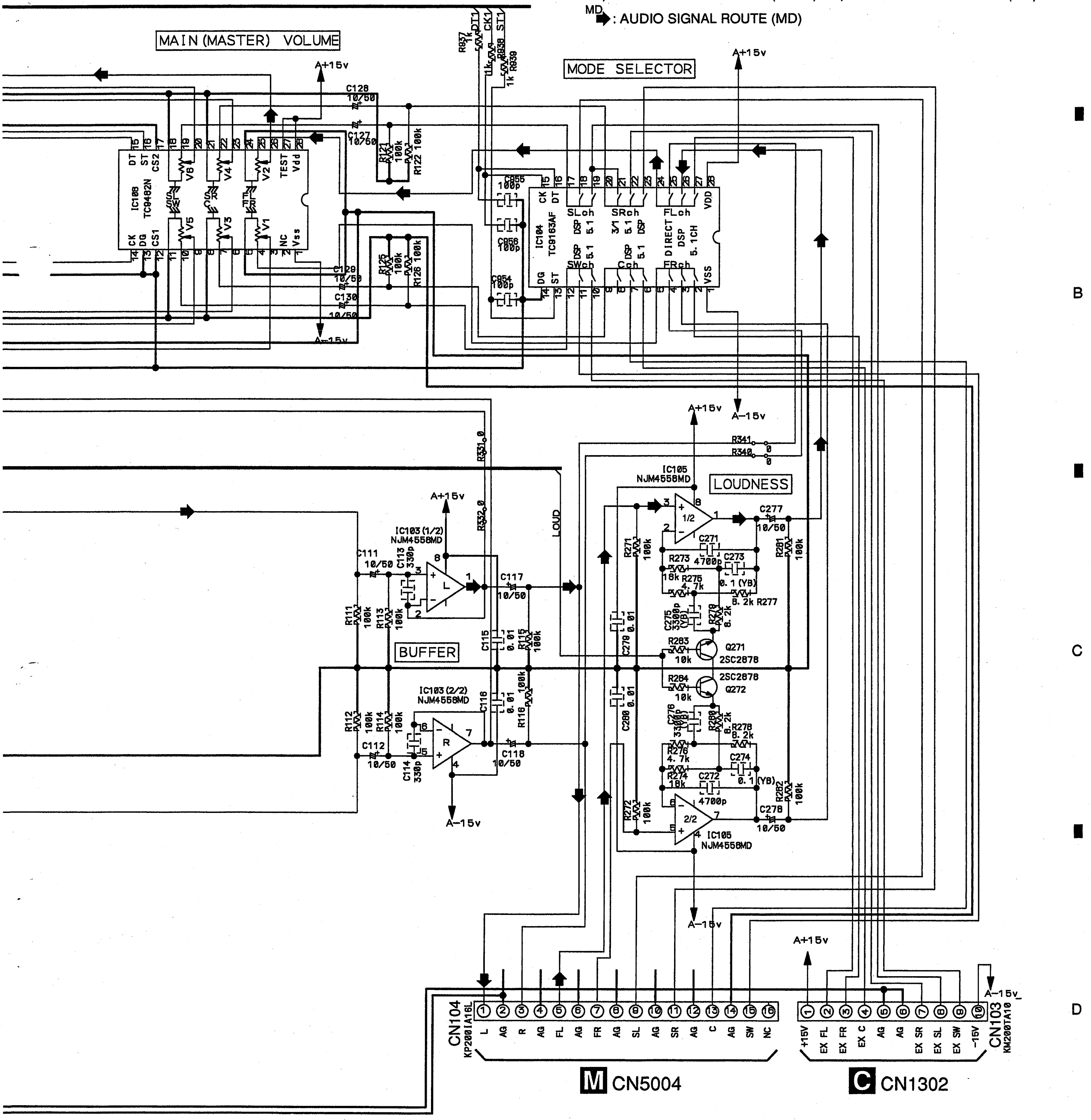
3.4 MAIN CONTROL ASSY (1/3)

: The power supply is shown with the marked box.

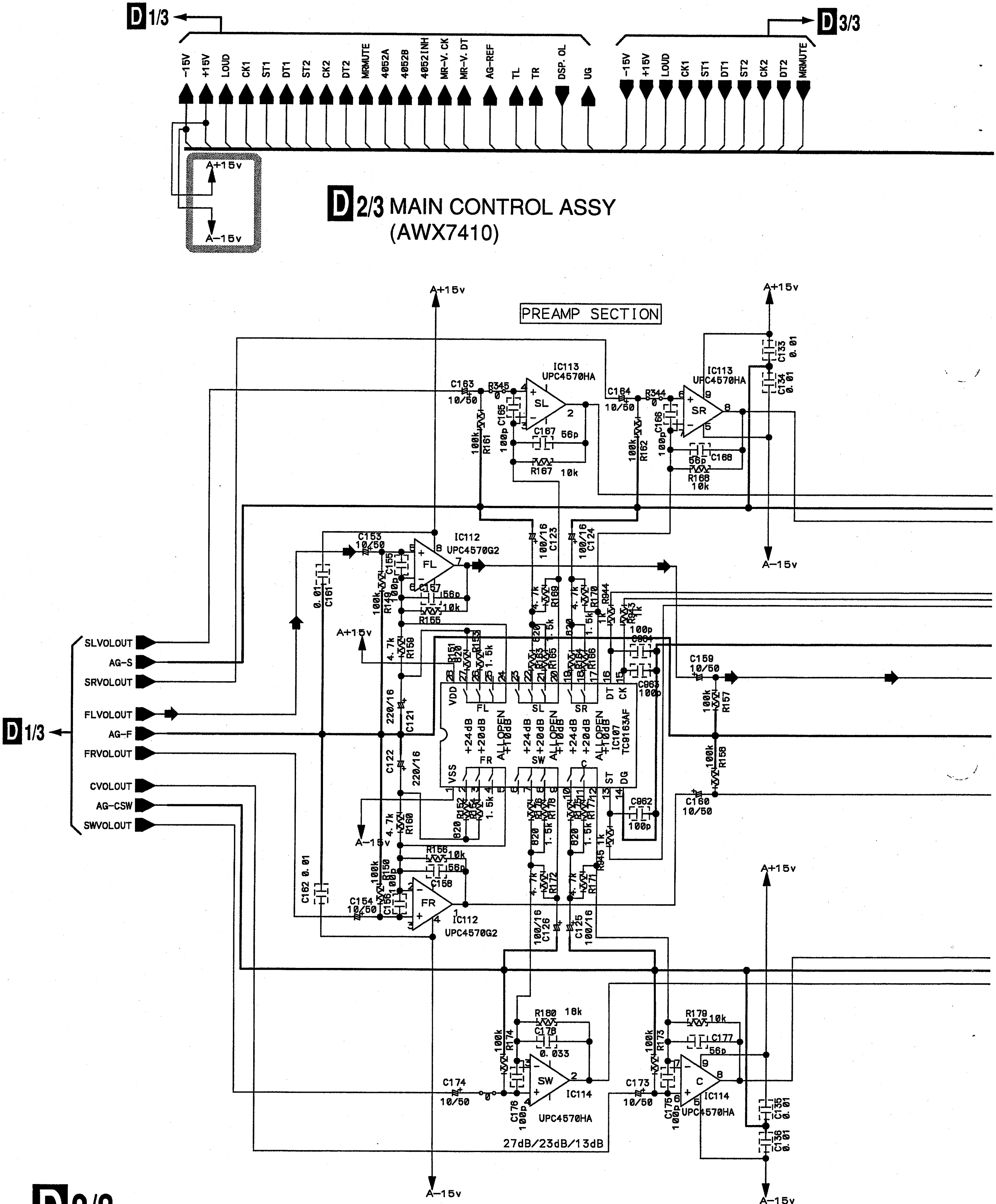

D 2/3
-15V
+15V
LOUD
CK1
ST1
DT1
ST2
CK2
DT2
MRMUTE
4052A
4052B
4052INH
MR-V.CK
MR-V.DT
AG-REF
TL
TR
DSP.OL
UG
TU
CONTROL 1
A+15v
A-15v
CN906
52045-0545
A+15V
FV-L
AG
FV-R
A-15V
S CN7005
C139 0.01
C140 0.01
D 2/3
AG_PREOUT
909 VEF1040-
912 VEF1040-
R338 0
FLVOLOUT
AG-F
FRVOLOUT
CVOLOUT
AG-CSW
SWVOLOUT
SLVOLOUT
AG-S
SRVOLOUT
R940 1k
R941 1k
R942 1k
C959 100p
C958 100p
C957 100p
OVER INPUT DETECTION
Q251 2SC2412K
C255 10/50
D255 1SS355
R260 10k
R257 100k
R259 10k
C137 0.01
D256 UDZJ5.1B
R261 10k
C257 1/50
R258 10k
R256 100k
C138 0.01
D254 1SS355
Q252 2SC2412K
C256 10/50
MAIN & SUB FUNCTION
R933 1k
R932 1k
R318 0
R319 0
C953 100p
C952 100p
CN941 (1/2)
JA911
CN941 (2/2)
TAPE2 L
PLAY
REC
T2
R105 330
C105 220p
C103 220p
R103 1k
CD L
CD R
CD
R101 330
C101 220p
C102 220p
R102 330
GND
TAPE2 R
R104 1k
C104 220p
C106 220p
R106 330
MD
V1
V2
TV
LD
P
C107 0.01
C108 0.01
VSS
VDD
MD
V1 IN
V2 IN
TV/SAT
DVD/LD
PHONO
F.VIDEO
CD
TAPE OUT
TAPE IN
MD OUT
V1 OUT
V2 OUT
TUNER
MR TUNER
MR CD
DG
CK
L
ST
DT
R
IC101
TC9274N-001(DIP)
R147 1k
C965 0.01
R148 100k
R321 0
C951 100p
R931 1k
R337 0
CN941 : AKB7075
JA911 : DKB1045
R311 0
R310 0
R309 0
R308 0
R307 0
R306 0
R305 0
R304 0
R303 0
R302 0
R301 0
R300 0
CN101
KM200TA20
V2/OUT
V1/OUT
MD/OUT
PHONO
DVD/LD
TV/SAT
V2/IN
V1/IN
MD/IN
AG
AG
MD/IN
V1/IN
V2/IN
TV/SAT
DVD/LD
PHONO
MD/OUT
V1/OUT
V2/OUT
L ch
R ch
C CN1353

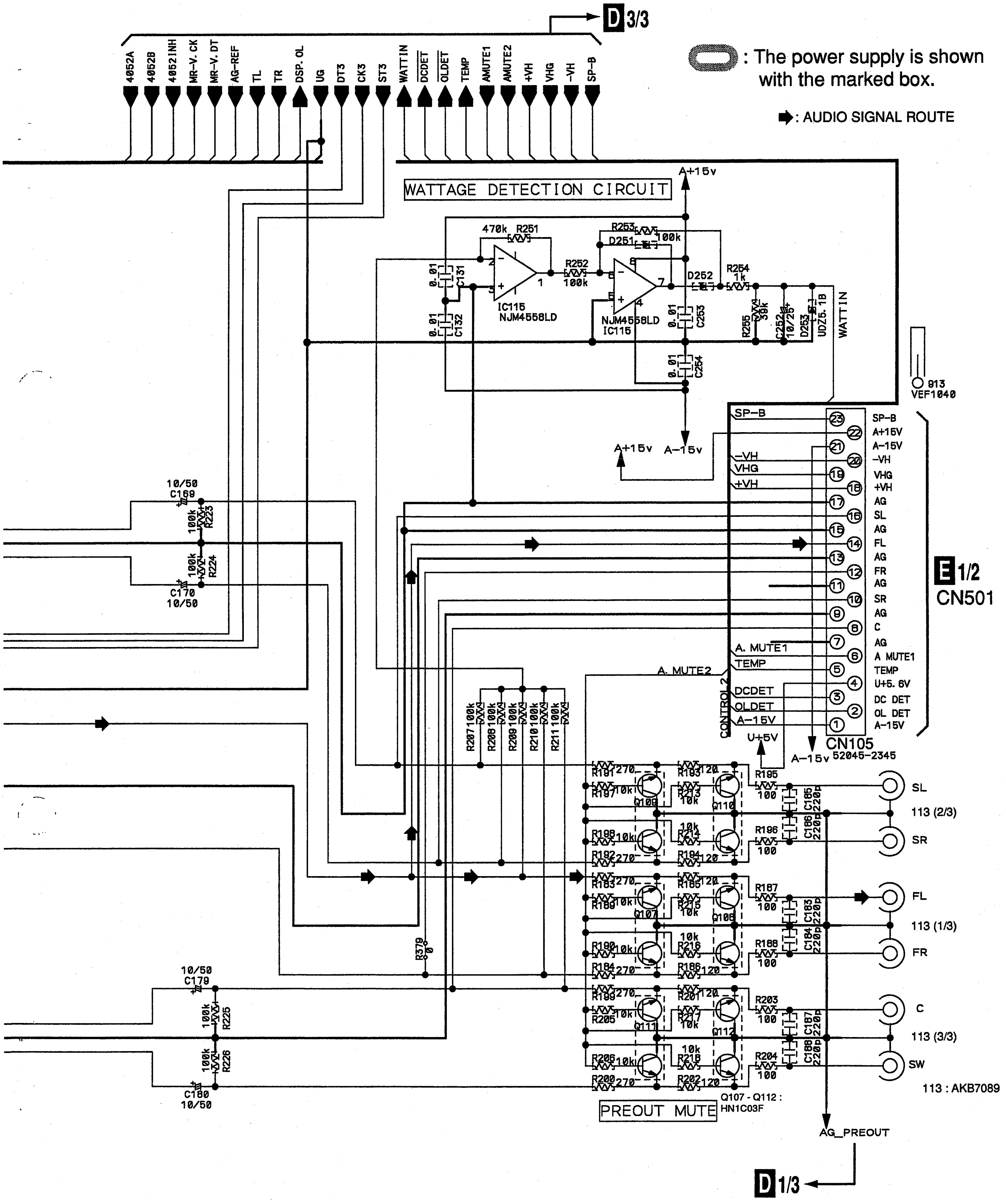
D 1/3
MAIN CONTROL ASSY
(AWX7410)

➡: AUDIO SIGNAL ROUTE
LD➡: AUDIO SIGNAL ROUTE (LD)
TV➡: AUDIO SIGNAL ROUTE (TV)
V1➡: AUDIO SIGNAL ROUTE (VCR1)
V2➡: AUDIO SIGNAL ROUTE (VCR2)
MD➡: AUDIO SIGNAL ROUTE (MD)
P➡: AUDIO SIGNAL ROUTE (PHONO)
TU➡: AUDIO SIGNAL ROUTE (TUNER)
CD➡: AUDIO SIGNAL ROUTE (CD)
T2➡: AUDIO SIGNAL ROUTE (TAPE2)
MR➡: AUDIO SIGNAL ROUTE (MR)


MAIN (MASTER) VOLUME
IC108 TC9482N
A+15v
A-15v
C128 10/50
C127 10/50
C129 10/50
C130 10/50
R121 100k
R122 100k
R125 100k
R126 100k
R837 1k
R838 1k
R839 1k
DT1
CK1
ST1
MODE SELECTOR
IC104 TC9163AF
C955 100p
C956 100p
C954 100p
SLch
SRch
FLch
SWch
Cch
FRch
DIRECT DSP 5.1CH
VDD
VSS
R331 0
R332 0
LOUD
IC103 (1/2) NJM4558MD
IC103 (2/2) NJM4558MD
C111 10/50
C112 10/50
C113 330p
C114 330p
C115 0.01
C116 0.01
C117 10/50
C118 10/50
R111 100k
R112 100k
R113 100k
R114 100k
R115 100k
R116 100k
BUFFER
R341 0
R340 0
IC105 NJM4558MD
LOUDNESS
C271 4700p
C272 4700p
C273 0.1 (YB)
C274 0.1 (YB)
C275 3300p (YB)
C276 3300p (YB)
C277 10/50
C278 10/50
C279 0.01
C280 0.01
R271 100k
R272 100k
R273 18k
R274 18k
R275 4.7k
R276 4.7k
R277 8.2k
R278 8.2k
R279 8.2k
R280 8.2k
R281 100k
R282 100k
R283 10k
R284 10k
Q271 2SC2878
Q272 2SC2878
CN104 KP200IA16L
L AG R AG FL AG FR AG SL AG SR AG C AG SW NC
CN103 KM200TA10
+15V EX FL EX FR EX C AG AG EX SR EX SL EX SW -15V
M CN5004
C CN1302

3.5 MAIN CONTROL ASSY (2/3)

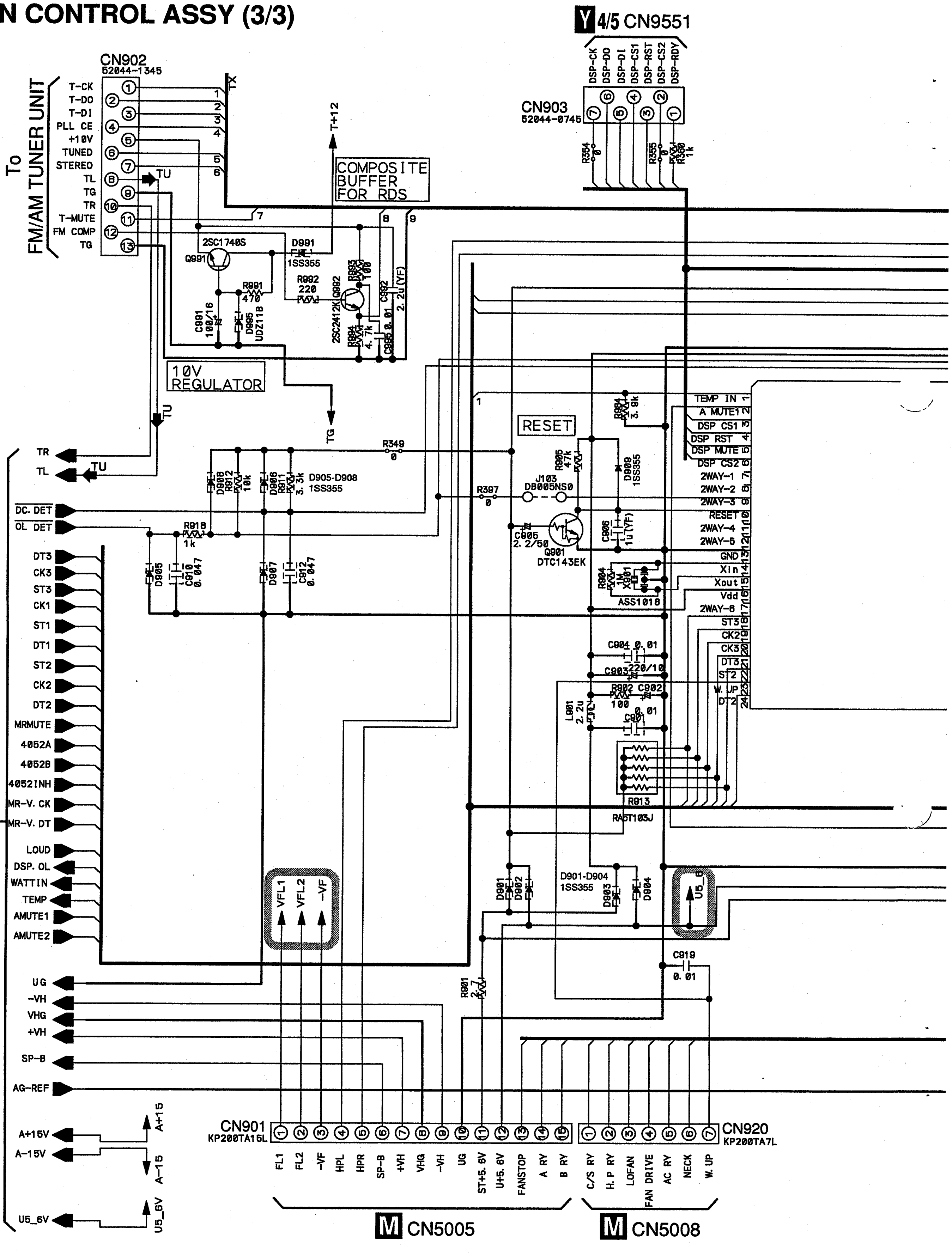

D 1/3
D 3/3
-15V
+15V
LOUD
CK1
ST1
DT1
ST2
CK2
DT2
MRMUTE
4052A
4052B
4052INH
MR-V.CK
MR-V.DT
AG-REF
TL
TR
DSP.OL
UG
A+15v
A-15v
D 2/3 MAIN CONTROL ASSY
(AWX7410)
PREAMP SECTION
IC113
UPC4570HA
SL
SR
C163 10/50
R345 0
C164 10/50
R344 0
C165 100p
C166 100p
C167 56p
C168 56p
R161 100k
R162 100k
R167 10k
R168 10k
C133 0.01
C134 0.01
C123 100/16
C124 100/16
IC112
UPC4570G2
FL
FR
C153 10/50
C154 10/50
C155 100p
C156 100p
C157 56p
C158 56p
R149 100k
R150 100k
R155 10k
R156 10k
C161 0.01
C162 0.01
R159 4.7k
R160 4.7k
C121 220/16
C122 220/16
R151 820
R152 820
R153 1.5k
R154 1.5k
R169 4.7k
R170 4.7k
R163 820
R164 820
R165 1.5k
R166 1.5k
R944 1k
R943 1k
R945 1k
C964 100p
C963 100p
C962 100p
IC107
TC9163AF
VDD
VSS
DT
CK
ST
DG
+24dB
+20dB
+10dB
ALL OPEN
SW
C
R171 4.7k
R172 4.7k
R175 820
R176 820
R177 1.5k
R178 1.5k
C125 100/16
C126 100/16
C159 10/50
C160 10/50
R157 100k
R158 100k
SLVOLOUT
AG-S
SRVOLOUT
FLVOLOUT
AG-F
FRVOLOUT
CVOLOUT
AG-CSW
SWVOLOUT
IC114
UPC4570HA
R180 18k
R179 10k
C178 0.033
C177 56p
R174 100k
R173 100k
C174 10/50
C173 10/50
C176 100p
C175 100p
C135 0.01
C136 0.01
27dB/23dB/13dB


D 3/3
4052A
4052B
4052INH
MR-V.CK
MR-V.DT
AG-REF
TL
TR
DSP.OL
UG
DT3
CK3
ST3
WATTIN
DCDET
OLDET
TEMP
AMUTE1
AMUTE2
+VH
VHG
-VH
SP-B
WATTAGE DETECTION CIRCUIT
A+15v
470k R251
R253 100k
D251
R252 100k
IC115 NJM4558LD
NJM4558LD IC115
D252
R254 1k
0.01 C131
0.01 C132
0.01 C253
0.01 C254
R255 39k
C252 10/25
D253 UDZ5.1B
WATTIN
913 VEF1040
A+15v A-15v
SP-B
-VH
VHG
+VH
A. MUTE1
TEMP
A. MUTE2
CONTROL2
DCDET
OLDET
A-15V
U+5V
A-15v
CN105 52045-2345
SP-B
A+15V
A-15V
-VH
VHG
+VH
AG
SL
AG
FL
AG
FR
AG
SR
AG
C
AG
A MUTE1
TEMP
U+5.6V
DC DET
OL DET
A-15V
E 1/2
CN501
10/50 C169
100k R223
100k R224
C170 10/50
R207 100k
R208 100k
R209 100k
R210 100k
R211 100k
R379 0
10/50 C179
100k R225
100k R226
C180 10/50
R191 270
R197 10k
Q109
R193 120
R213 10k
Q110
R198 10k
R192 270
R214 10k
R194 120
R195 100
R196 100
C185 220p
C186 220p
SL
113 (2/3)
SR
R183 270
R199 10k
Q107
R185 120
R215 10k
Q108
R190 10k
R184 270
R216 10k
R186 120
R187 100
R188 100
C183 220p
C184 220p
FL
113 (1/3)
FR
R199 270
R205 10k
Q111
R201 120
R217 10k
Q112
R206 10k
R200 270
R218 10k
R202 120
R203 100
R204 100
C187 220p
C188 220p
C
113 (3/3)
SW
113 : AKB7089
PREOUT MUTE
Q107 - Q112 : HN1C03F
AG_PREOUT
D 1/3

: The power supply is shown with the marked box.

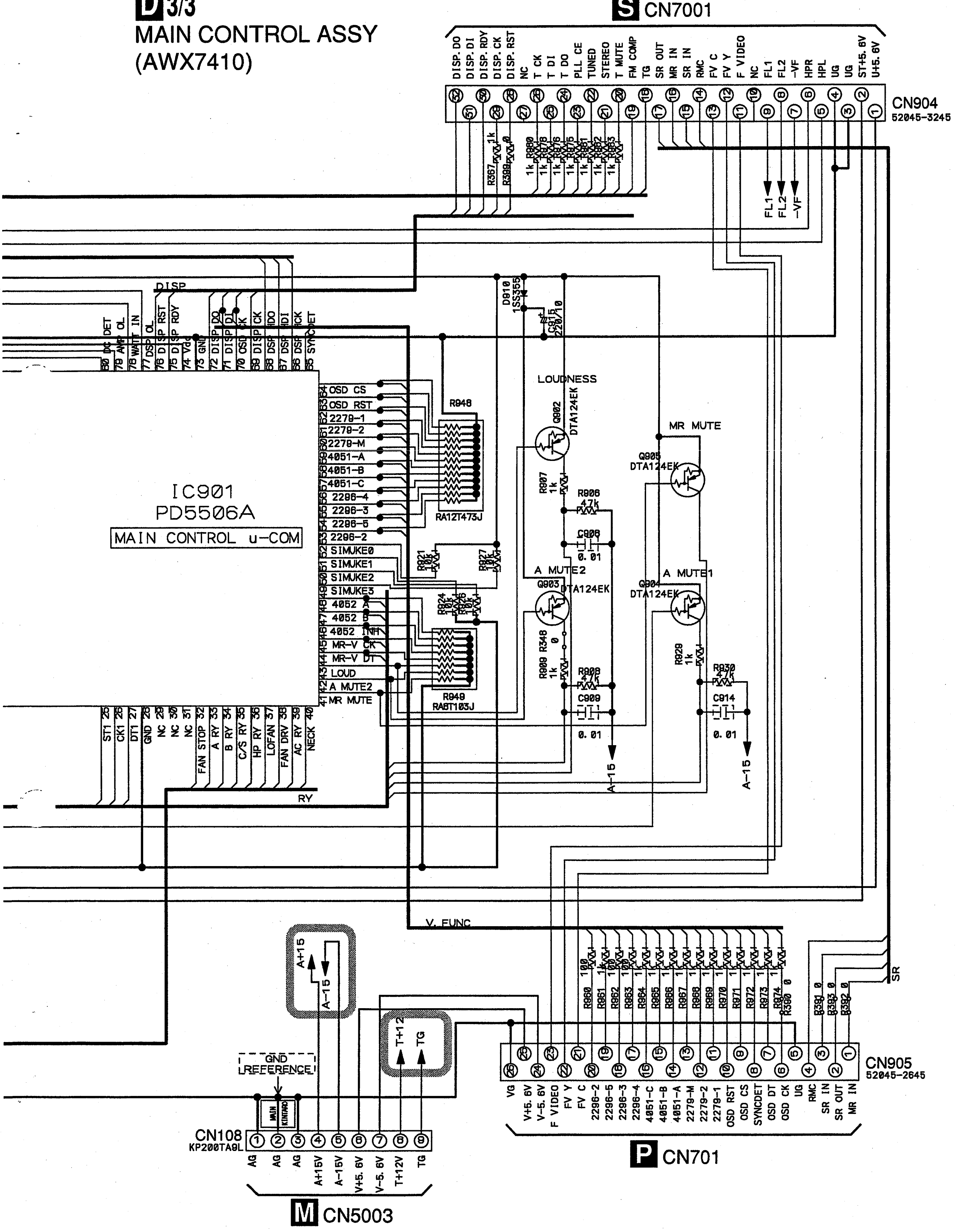
➡: AUDIO SIGNAL ROUTE

3.6 MAIN CONTROL ASSY (3/3)


Y 4/5 CN9551
DSP-CK
DSP-DO
DSP-DI
DSP-CS1
DSP-RST
DSP-CS2
DSP-RDY
CN903
52044-0745
R354 0
R355 0
R360 1k
CN902
52044-1345
To FM/AM TUNER UNIT
T-CK
T-DO
T-DI
PLL CE
+10V
TUNED
STEREO
TL
TG
TR
T-MUTE
FM COMP
TG
TX
T+12
TU
COMPOSITE BUFFER FOR RDS
2SC1740S
Q991
D991 1SS355
R991 470
R992 220
R993 100
C992 2.2u (YF)
C991 100/16
D995 UDZ11B
2SC2412K Q992
R994 4.7k
C995 0.01
10V REGULATOR
TG
TR
TL
DC. DET
OL DET
R349 0
D905-D908 1SS355
D908
R912 10k
D906
R911 3.3k
R910 1k
D905
C910 0.047
D907
C912 0.047
RESET
R397 0
J103 DB005NS0
R905 47k
D909 1SS355
C905 2.2/50
Q901 DTC143EK
C906 1u (YF)
R904 1M
X901
ASS1018
R984 3.9k
TEMP IN
A MUTE1
DSP CS1
DSP RST
DSP MUTE
DSP CS2
2WAY-1
2WAY-2
2WAY-3
RESET
2WAY-4
2WAY-5
GND
Xin
Xout
Vdd
2WAY-6
ST3
CK2
CK3
DT3
ST2
W. UP
DT2
C904 0.01
C903 220/10
R902 100
C902
L901 2.2u
C901 0.01
R913 RA5T103J
DT3
CK3
ST3
CK1
ST1
DT1
ST2
CK2
DT2
MRMUTE
4052A
4052B
4052INH
MR-V. CK
MR-V. DT
D 2/3
LOUD
DSP. OL
WATTIN
TEMP
AMUTE1
AMUTE2
VFL1
VFL2
-VF
D901
D902
D901-D904 1SS355
D903
D904
U5_6
C919 0.01
R901 2.7
UG
-VH
VHG
+VH
SP-B
AG-REF
A+15V
A-15V
A+15
A-15
U5_6V
U5_6V
CN901
KP200TA15L
FL1
FL2
-VF
HPL
HPR
SP-B
+VH
VHG
-VH
UG
ST+5.6V
U+5.6V
FANSTOP
A RY
B RY
CN920
KP200TA7L
C/S RY
H.P RY
LOFAN
FAN DRIVE
AC RY
NECK
W. UP
M CN5005
M CN5008

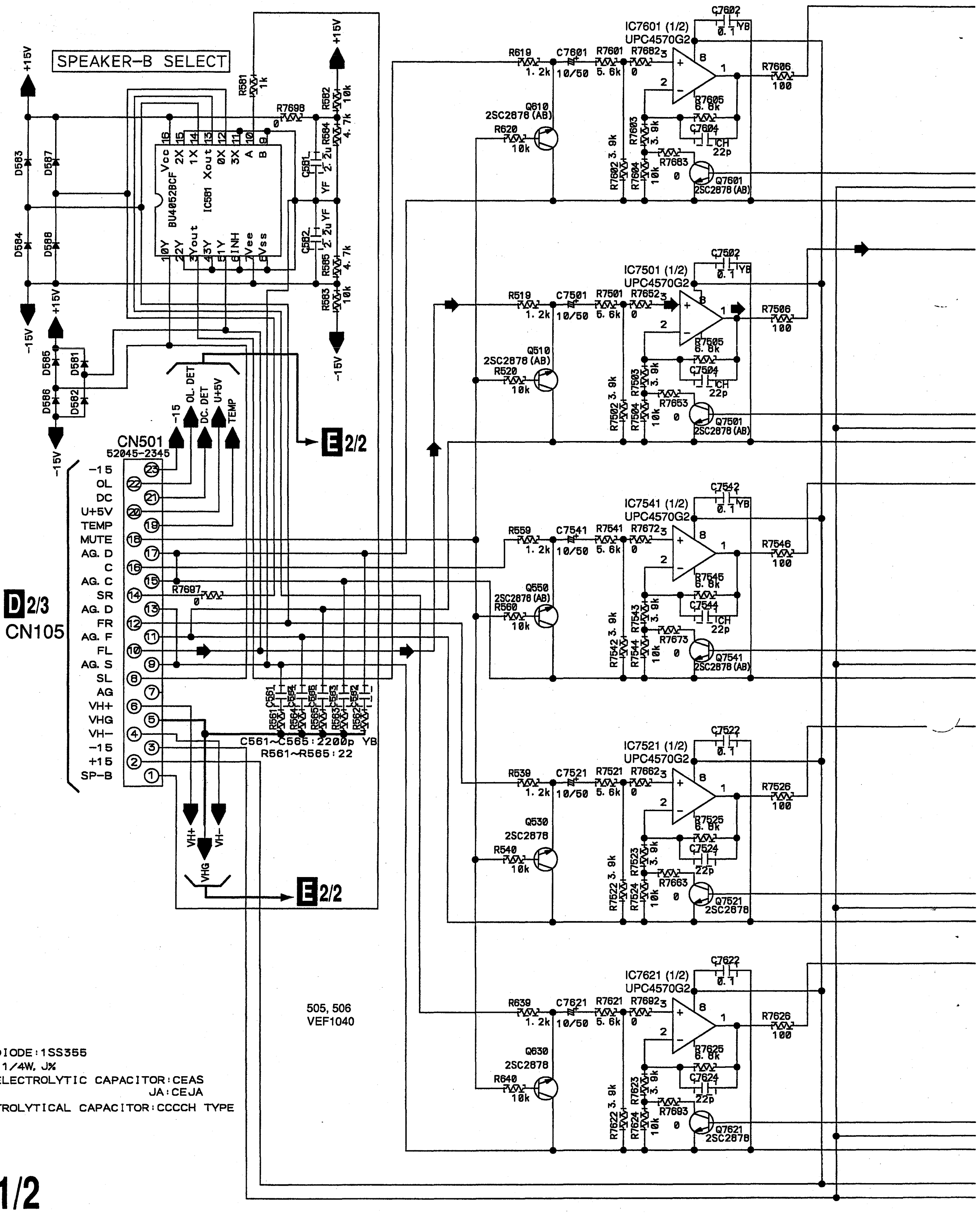
: The power supply is shown with the marked box.

D 3/3
MAIN CONTROL ASSY
(AWX7410)

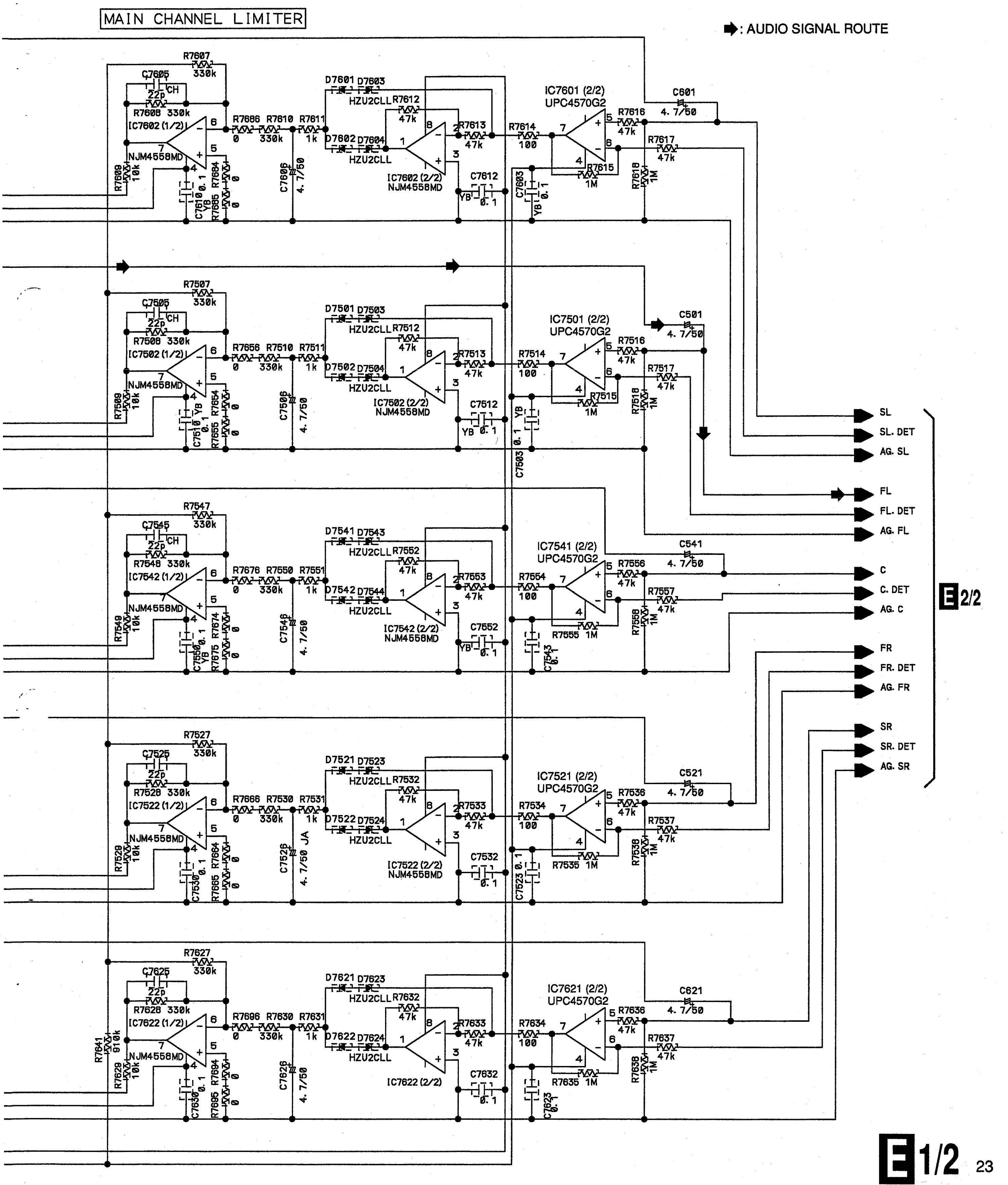

S CN7001
CN904
52045-3245
DISP.DO
DISP.DI
DISP.RDY
DISP.CK
DISP.RST
NC
T CK
T DI
T DO
PLL CE
TUNED
STEREO
T MUTE
FM COMP
TG
SR OUT
MR IN
SR IN
RMC
FV C
FV Y
F VIDEO
NC
FL1
FL2
-VF
HPR
HPL
UG
UG
ST+5.6V
U+5.6V
R367 1k
R399 0
R980 1k
R978 1k
R976 1k
R975 1k
R981 1k
R982 1k
R983 1k
FL1
FL2
-VF
DISP
D910 1SS355
C915 220/10
LOUDNESS
Q902 DTA124EK
R907 1k
R906 47k
C908 0.01
MR MUTE
Q905 DTA124EK
A MUTE2
Q903 DTA124EK
A MUTE1
Q904 DTA124EK
R909 1k
R348 0
R908 4.7k
C909 0.01
R929 1k
R930 47k
C914 0.01
A-15
A-15
R948
RA12T473J
R921 10k
R927 10k
R924 10k
R926 10k
R949
RA8T103J
IC901
PD5506A
MAIN CONTROL u-COM
80 DC DET
79 AMP OL
78 WAIT IN
77 DISP OL
76 DISP RST
75 DISP RDY
74 Vdd
73 GND
72 DISP DO
71 DISP DI
70 OSD CK
69 DISP CK
68 DSP IDO
67 DSP IDI
66 DSP ICK
65 SYNCDET
64 OSD CS
63 OSD RST
62 2279-1
61 2279-2
60 2279-M
59 4051-A
58 4051-B
57 4051-C
56 2296-4
55 2296-3
54 2296-5
53 2296-2
52 SIMJKE0
51 SIMJKE1
50 SIMJKE2
49 SIMJKE3
48 4052 A
47 4052 B
46 4052 INH
45 MR-V CK
44 MR-V DT
43 LOUD
42 A MUTE2
41 MR MUTE
25 ST1
26 CK1
27 DT1
28 GND
29 NC
30 NC
31 NC
32 FAN STOP
33 A RY
34 B RY
35 C/S RY
36 HP RY
37 LOFAN
38 FAN DRV
39 AC RY
40 NECK
RY
V. FUNC
SR
R960 100
R961 1k
R962 100
R963 100
R964 1k
R965 1k
R966 1k
R967 1k
R968 1k
R969 1k
R970 1k
R971 1k
R972 1k
R973 1k
R974 1k
R390 0
R391 0
R393 0
R392 0
CN905
52045-2645
VG
V+5.6V
V-5.6V
F VIDEO
FV Y
FV C
2296-2
2296-5
2296-3
2296-4
4051-C
4051-B
4051-A
2279-M
2279-2
2279-1
OSD RST
OSD CS
SYNCDET
OSD DT
OSD CK
UG
RMC
SR IN
SR OUT
MR IN
P CN701
A+15
A-15
T+12
TG
GND REFERENCE
MAIN
KIKIANO
CN108
KP200TA9L
AG
AG
AG
A+15V
A-15V
V+5.6V
V-5.6V
T+12V
TG
M CN5003
A
B
C
D

3.7 V-AMP ASSY (1/2)

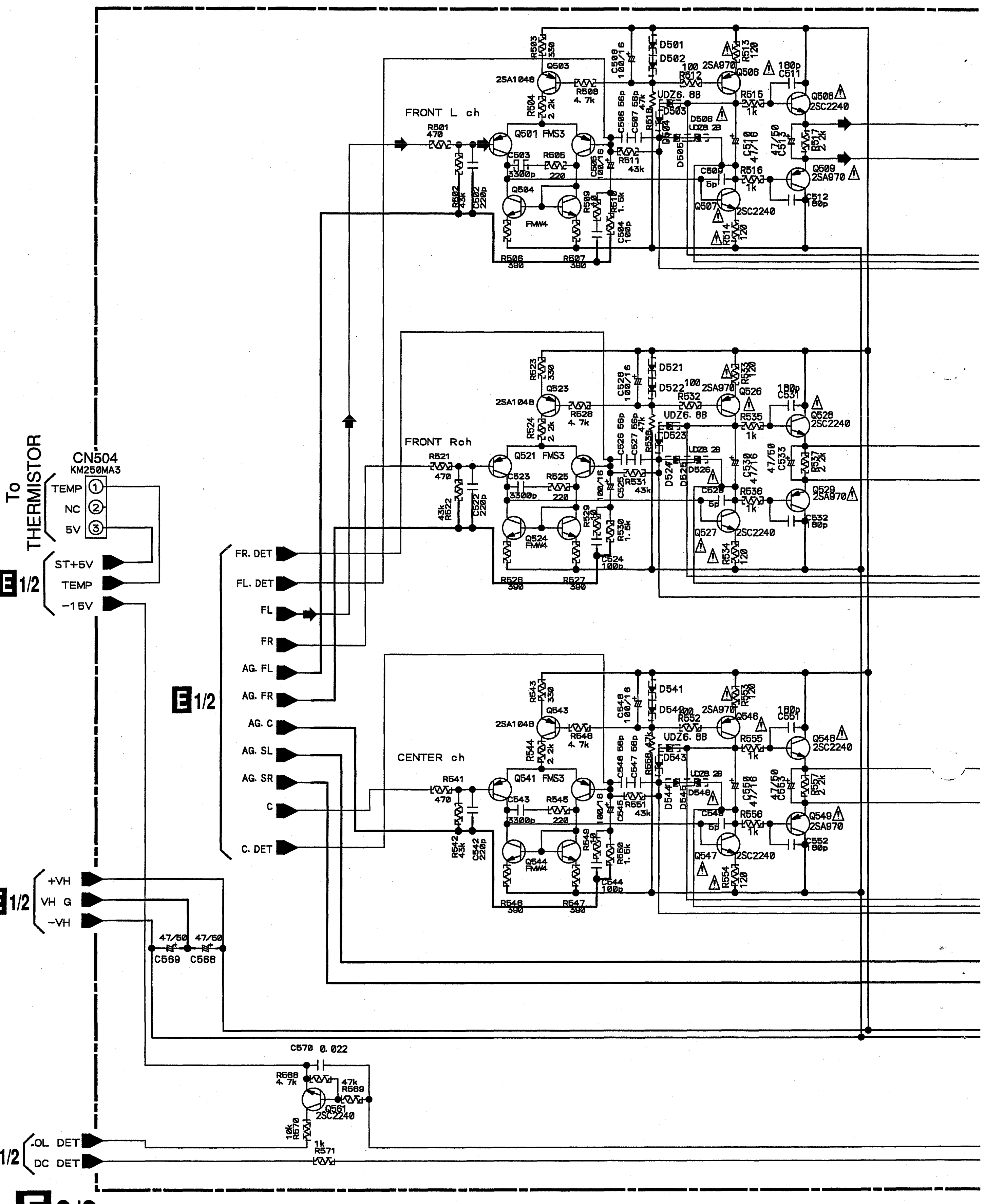
E 1/2 V-AMP ASSY
(AWX7309)


SPEAKER-B SELECT
+15V
-15V
D583
D584
D587
D588
D585
D586
D581
D582
R581 1k
R7698 0
R582 10k
R584 4.7k
R585 4.7k
R583 10k
C581 2.2u YF
C582 2.2u YF
IC581 BU4052BCF
Vcc 2X 1X Xout 0X 3X A B
0Y 2Y Yout 3Y 1Y INH Vee Vss
OL. DET
DC DET
U+5V
TEMP
-15
E 2/2
CN501
52045-2345
-15
OL
DC
U+5V
TEMP
MUTE
AG. D
C
AG. C
SR
AG. D
FR
AG. F
FL
AG. S
SL
AG
VH+
VHG
VH-
-15
+15
SP-B
D 2/3
CN105
R7697 0
C561 C564 C565 C563 C562
R561 R564 R565 R563 R562
C561~C565:2200p YB
R561~R565:22
VH+
VHG
VH-
E 2/2
505, 506
VEF1040
IC7601 (1/2)
UPC4570G2
C7602 0.1 YB
R619 1.2k
C7601 10/50
R7601 5.6k
R7682 0
R7606 100
R7605 6.8k
C7604 22p CH
R7603 3.9k
R7602 3.9k
R7604 10k
R7683 0
Q7601 2SC2878(AB)
Q610 2SC2878(AB)
R620 10k
IC7501 (1/2)
UPC4570G2
C7502 0.1 YB
R519 1.2k
C7501 10/50
R7501 5.6k
R7652 0
R7506 100
R7505 6.8k
C7504 22p CH
R7503 3.9k
R7502 3.9k
R7504 10k
R7653 0
Q7501 2SC2878(AB)
Q510 2SC2878(AB)
R520 10k
IC7541 (1/2)
UPC4570G2
C7542 0.1 YB
R559 1.2k
C7541 10/50
R7541 5.6k
R7672 0
R7546 100
R7545 6.8k
C7544 22p CH
R7543 3.9k
R7542 3.9k
R7544 10k
R7673 0
Q7541 2SC2878(AB)
Q550 2SC2878(AB)
R560 10k
IC7521 (1/2)
UPC4570G2
C7522 0.1
R539 1.2k
C7521 10/50
R7521 5.6k
R7662 0
R7526 100
R7525 6.8k
C7524 22p
R7523 3.9k
R7522 3.9k
R7524 10k
R7663 0
Q7521 2SC2878
Q530 2SC2878
R540 10k
IC7621 (1/2)
UPC4570G2
C7622 0.1
R639 1.2k
C7621 10/50
R7621 5.6k
R7692 0
R7626 100
R7625 6.8k
C7624 22p
R7623 3.9k
R7622 3.9k
R7624 10k
R7693 0
Q7621 2SC2878
Q630 2SC2878
R640 10k

- NO MARK DIODE:1SS355
- RESISTOR:1/4W, J%
- NO MARK ELECTROLYTIC CAPACITOR:CEAS
  JA:CEJA
- NON ELECTROLYTICAL CAPACITOR:CCCCH TYPE


MAIN CHANNEL LIMITER
➡: AUDIO SIGNAL ROUTE
R7607 330k
C7605 22p CH
R7608 330k
IC7602 (1/2)
NJM4558MD
R7609 10k
C7610 YB 0.1
R7684 0
R7685 0
R7686 0
R7610 330k
R7611 1k
C7606 4.7/50
D7601 D7603
HZU2CLL
D7602 D7604
HZU2CLL
R7612 47k
R7613 47k
IC7602 (2/2)
NJM4558MD
C7612 YB 0.1
R7614 100
C7603 YB 0.1
IC7601 (2/2)
UPC4570G2
R7616 47k
R7617 47k
R7615 1M
R7618 1M
C601 4.7/50
R7507 330k
C7505 22p CH
R7508 330k
IC7502 (1/2)
NJM4558MD
R7509 10k
C7510 YB 0.1
R7654 0
R7655 0
R7656 0
R7510 330k
R7511 1k
C7506 4.7/50
D7501 D7503
HZU2CLL
D7502 D7504
HZU2CLL
R7512 47k
R7513 47k
IC7502 (2/2)
NJM4558MD
C7512 YB 0.1
R7514 100
C7503 YB 0.1
IC7501 (2/2)
UPC4570G2
R7516 47k
R7517 47k
R7515 1M
R7518 1M
C501 4.7/50
R7547 330k
C7545 22p CH
R7548 330k
IC7542 (1/2)
NJM4558MD
R7549 10k
C7550 YB 0.1
R7674 0
R7675 0
R7676 0
R7550 330k
R7551 1k
C7546 4.7/50
D7541 D7543
HZU2CLL
D7542 D7544
HZU2CLL
R7552 47k
R7553 47k
IC7542 (2/2)
NJM4558MD
C7552 YB 0.1
R7554 100
C7543 0.1
IC7541 (2/2)
UPC4570G2
R7556 47k
R7557 47k
R7555 1M
R7558 1M
C541 4.7/50
R7527 330k
C7525 22p
R7528 330k
IC7522 (1/2)
NJM4558MD
R7529 10k
C7530 0.1
R7664 0
R7665 0
R7666 0
R7530 330k
R7531 1k
C7526 4.7/50 JA
D7521 D7523
HZU2CLL
D7522 D7524
HZU2CLL
R7532 47k
R7533 47k
IC7522 (2/2)
NJM4558MD
C7532 0.1
R7534 100
C7523 0.1
IC7521 (2/2)
UPC4570G2
R7536 47k
R7537 47k
R7535 1M
R7538 1M
C521 4.7/50
R7627 330k
C7625 22p
R7628 330k
IC7622 (1/2)
NJM4558MD
R7641 910k
R7629 10k
C7630 0.1
R7694 0
R7695 0
R7696 0
R7630 330k
R7631 1k
C7626 4.7/50
D7621 D7623
HZU2CLL
D7622 D7624
HZU2CLL
R7632 47k
R7633 47k
IC7622 (2/2)
C7632 0.1
R7634 100
C7623 0.1
IC7621 (2/2)
UPC4570G2
R7636 47k
R7637 47k
R7635 1M
R7638 1M
C621 4.7/50
SL
SL. DET
AG. SL
FL
FL. DET
AG. FL
C
C. DET
AG. C
FR
FR. DET
AG. FR
SR
SR. DET
AG. SR
E 2/2

3.8 V-AMP ASSY (2/2)

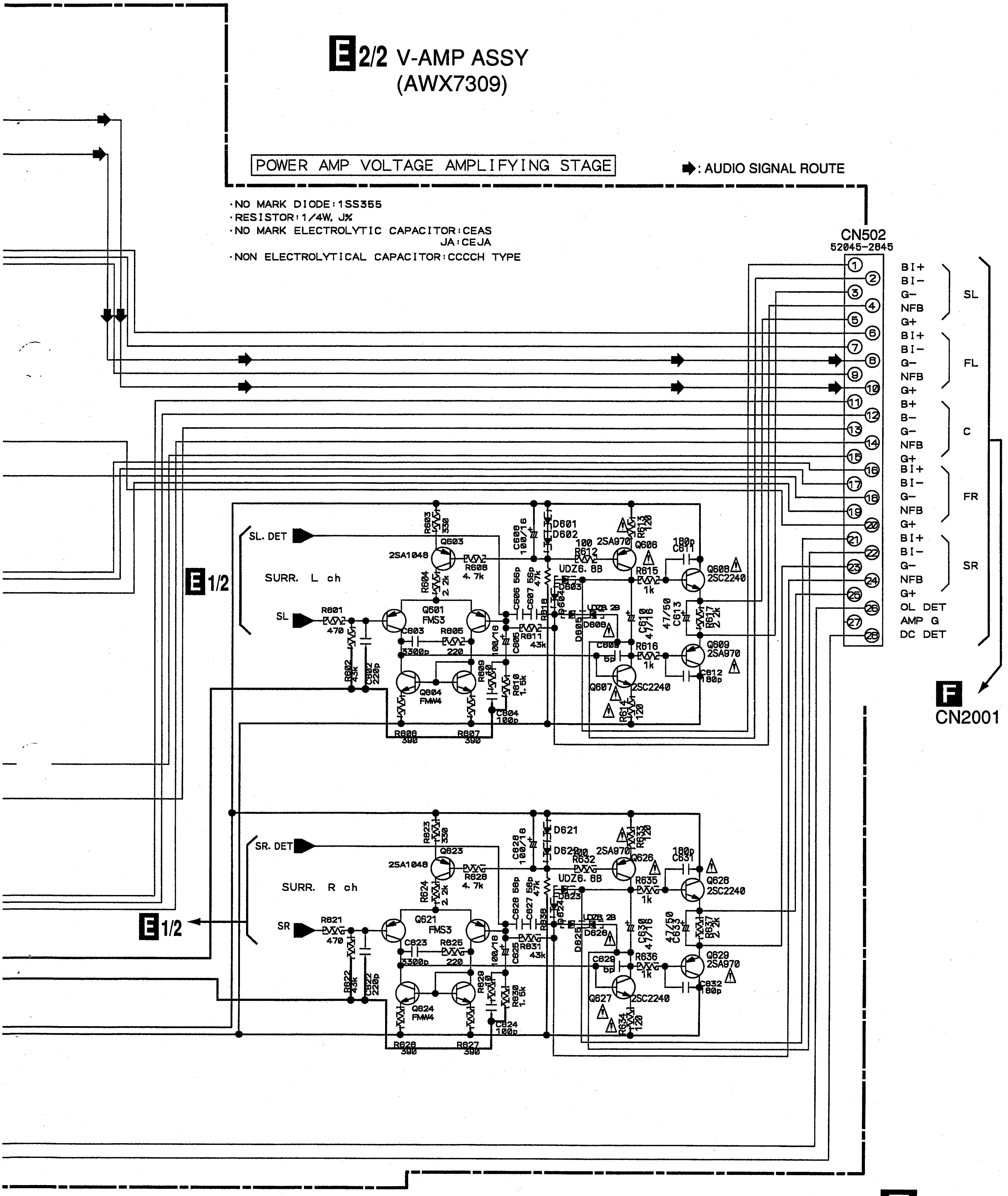

A
B
C
D
To THERMISTOR
CN504
KM250MA3
TEMP ①
NC ②
5V ③
E 1/2
ST+5V
TEMP
−15V
FR. DET
FL. DET
FL
FR
AG. FL
AG. FR
AG. C
AG. SL
AG. SR
C
C. DET
+VH
VH G
−VH
OL DET
DC DET
FRONT L ch
FRONT Rch
CENTER ch
R501 470
R502 43k
C502 220p
Q501 FMS3
C503 3300p
R505 220
Q504 FMW4
R506 390
R507 390
R509
R510 1.5k
C504 100p
C505 100/16
C506 56p
C507 56p
R511 43k
R518 47k
2SA1048
Q503
R503 330
R504 2.2k
R508 4.7k
C508 100/16
D501
D502
D503
D504
D505
D506
UDZ6.8B
UDZ8.2B
R512 100
2SA970
Q506
R513 120
C511 180p
Q508
2SC2240
R515 1k
C510 47/16
C513 47/50
R517 2.2k
C509 5p
R516 1k
Q509
2SA970
C512 180p
Q507
2SC2240
R514 120
R521 470
R522 43k
C522 220p
Q521 FMS3
C523 3300p
R525 220
Q524 FMW4
R526 390
R527 390
R529
R530 1.5k
C524 100p
C525 100/16
C526 56p
C527 56p
R531 43k
R538 47k
Q523
R523 330
R524 2.2k
R528 4.7k
C528 100/16
D521
D522
D523
D524
D525
D526
R532 100
Q526
R533 120
C531 180p
Q528 2SC2240
R535 1k
C530 47/16
C533 47/50
R537 2.2k
C529 5p
R536 1k
Q529 2SA970
C532 180p
Q527 2SC2240
R534 120
R541 470
R542 43k
C542 220p
Q541 FMS3
C543 3300p
R545 220
Q544 FMW4
R546 390
R547 390
R549
R550 1.5k
C544 100p
C545 100/16
C546 56p
C547 56p
R551 43k
R558 47k
Q543
R543 330
R544 2.2k
R548 4.7k
C548 100/16
D541
D542
D543
D544
D545
D546
R552 100
Q546
R553 120
C551 180p
Q548 2SC2240
R555 1k
C550 47/16
C553 47/50
R557 2.2k
C549 5p
R556 1k
Q549 2SA970
C552 180p
Q547 2SC2240
R554 120
C569 47/50
C568 47/50
C570 0.022
R568 4.7k
R569 47k
Q561 2SC2240
R570 10k
R571 1k

E 2/2 V-AMP ASSY
(AWX7309)

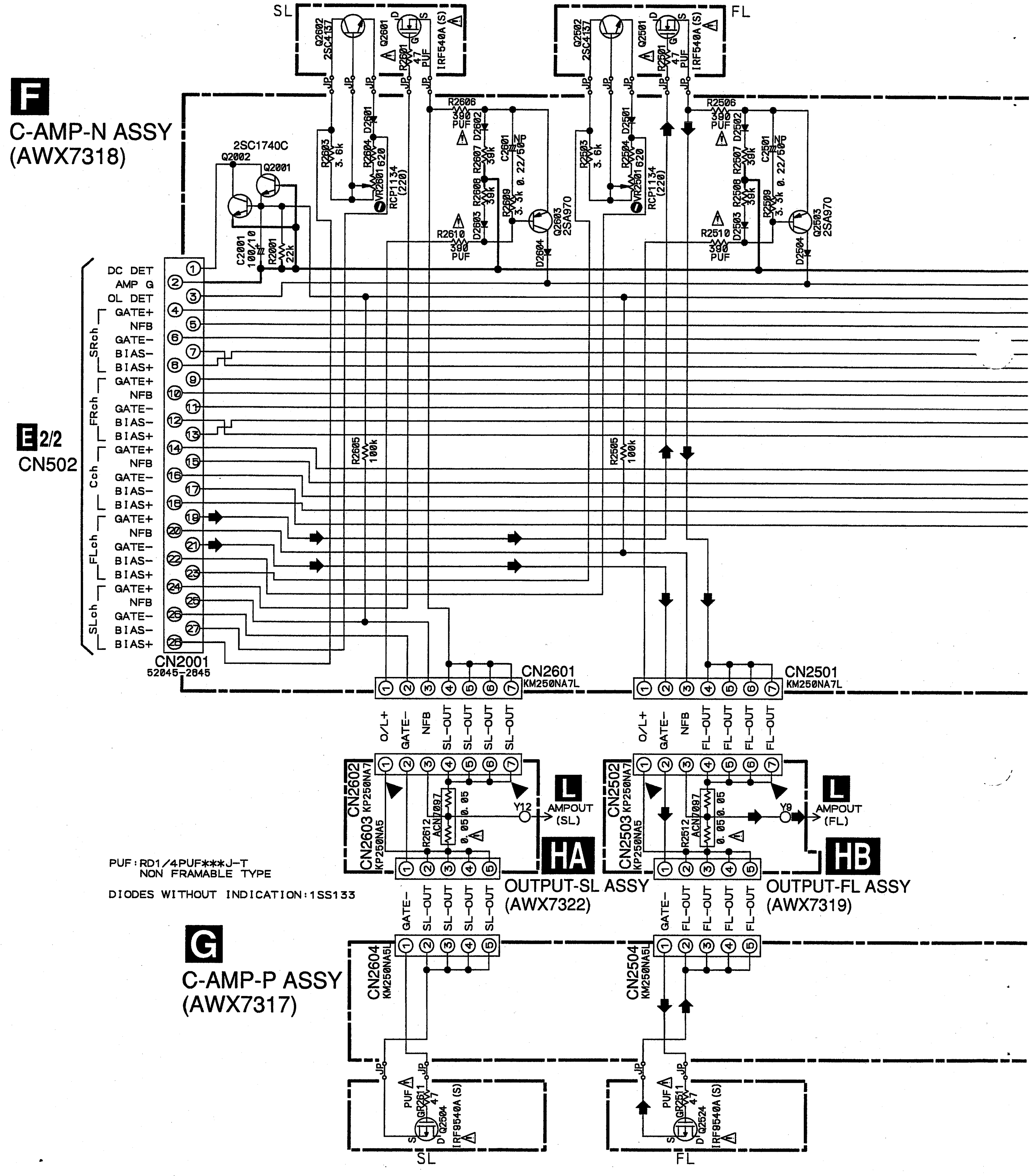
POWER AMP VOLTAGE AMPLIFYING STAGE

➡: AUDIO SIGNAL ROUTE

- ·NO MARK DIODE:1SS355
- ·RESISTOR:1/4W, J%
- ·NO MARK ELECTROLYTIC CAPACITOR:CEAS
  JA:CEJA
- ·NON ELECTROLYTICAL CAPACITOR:CCCCH TYPE

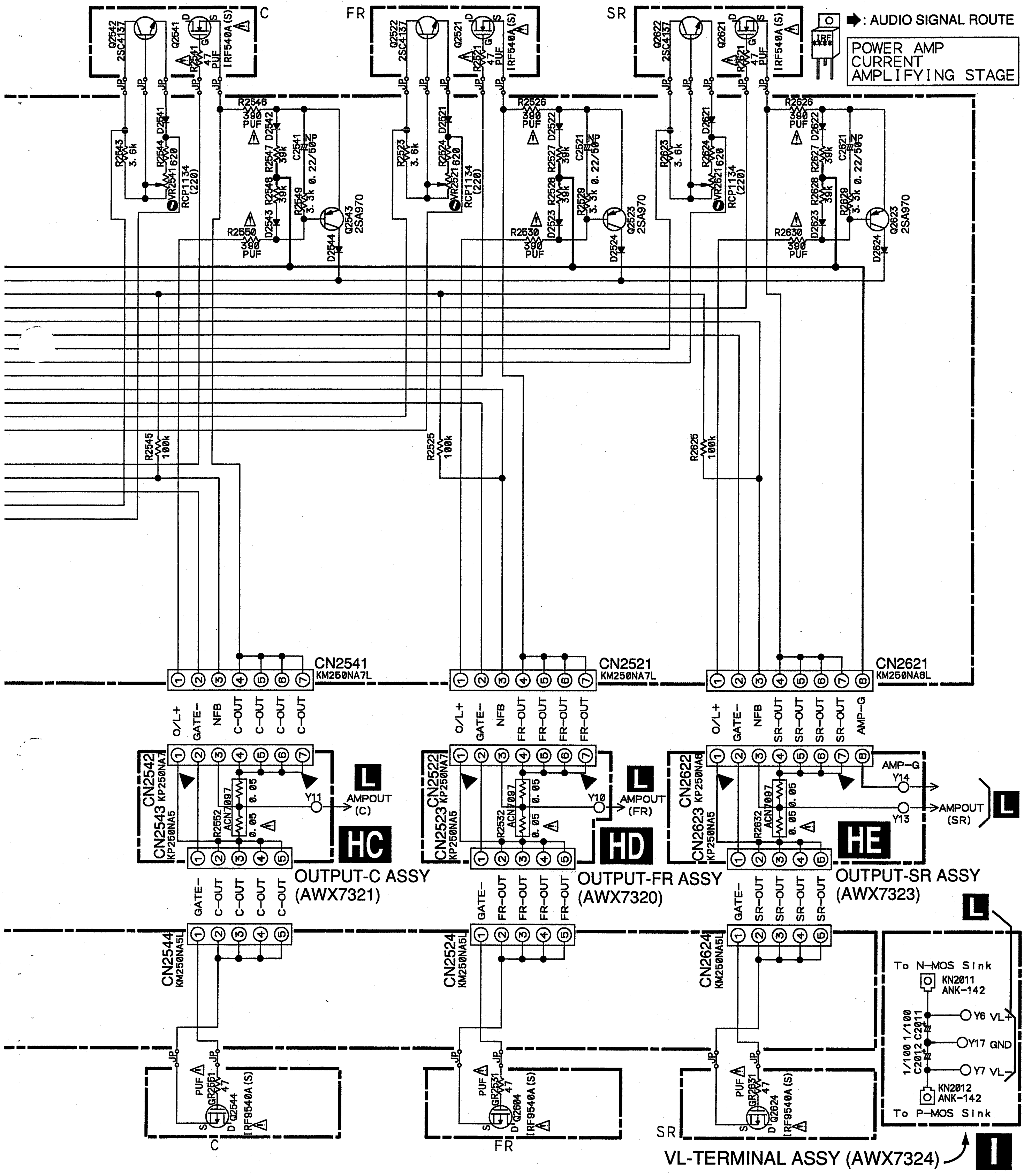

CN502
52045-2845
1 BI+
2 BI−
3 G−
4 NFB
5 G+
SL
6 BI+
7 BI−
8 G−
9 NFB
10 G+
FL
11 B+
12 B−
13 G−
14 NFB
15 G+
C
16 BI+
17 BI−
18 G−
19 NFB
20 G+
FR
21 BI+
22 BI−
23 G−
24 NFB
25 G+
SR
26 OL DET
27 AMP G
28 DC DET
F
CN2001
E 1/2
SL. DET
SURR. L ch
SL
R601 470
R602 43k
C602 220p
Q601 FMS3
C603 3300p
R605 220
Q604 FMW4
R606 390
R607 390
R603 330
Q603 2SA1048
R604 2.2k
R608 4.7k
R609 10
R610 1.5k
C604 100p
C605 100/16
C606 56p
C607 56p 47k
R611 43k
R618
C608 100/16
D601
D602
D603
D604
D605
D606
UDZ6.8B
UDZ8.2B
R612 100
Q606 2SA970
R613 120
R615 1k
C611 180p
Q608 2SC2240
C610 47/16
C613 47/50
R617 2.2k
C609 5p
R616 1k
Q607 2SC2240
R614 120
Q609 2SA970
C612 180p
SR. DET
SURR. R ch
SR
R621 470
R622 43k
C622 220p
Q621 FMS3
C623 3300p
R625 220
Q624 FMW4
R626 390
R627 390
R623 330
Q623 2SA1048
R624 2.2k
R628 4.7k
R629 10
R630 1.5k
C624 100p
C625 100/16
C626 56p
C627 56p 47k
R631 43k
R638
C628 100/16
D621
D622
D623
D624
D625
D626
UDZ6.8B
UDZ8.2B
R632 100
Q626 2SA970
R633 120
R635 1k
C631 180p
Q628 2SC2240
C630 47/16
C633 47/50
R637 2.2k
C629 5p
R636 1k
Q627 2SC2240
R634 120
Q629 2SA970
C632 180p
E 1/2

3.9 C-AMP-N, C-AMP-P, OUTPUT-SL, OUTPUT-FL, OUTPUT-C, OUTPUT-FR, OUTPUT-SR and VL-TERMINAL ASSYS


F
C-AMP-N ASSY
(AWX7318)
SL
FL
Q2602 2SC4137
Q2601 IRF540A (S)
Q2502 2SC4137
Q2501 IRF540A (S)
R2601 47 PUF
R2501 47 PUF
JP
R2606 390 PUF
R2506 390 PUF
D2601
D2602
D2501
D2502
R2603 3.6k
R2604 620
VR2601 RCP1134 (220)
R2503 3.6k
R2504 620
VR2501 RCP1134 (220)
R2607 39k
R2608 39k
R2609 3.3k
C2601 0.22/50NP
R2507 39k
R2508 39k
R2509 3.3k
C2501 0.22/50NP
Q2603 2SA970
Q2503 2SA970
D2603
D2604
D2503
D2504
R2610 390 PUF
R2510 390 PUF
2SC1740C
Q2002
Q2001
C2001 100/10
R2001 22k
DC DET
AMP G
OL DET
SRch
GATE+
NFB
GATE−
BIAS−
BIAS+
FRch
Cch
FLch
SLch
E 2/2
CN502
R2605 100k
R2505 100k
CN2001
52045-2845
CN2601
KM250NA7L
CN2501
KM250NA7L
O/L+
GATE−
NFB
SL−OUT
FL−OUT
CN2602 KP250NA7
CN2603 KP250NA5
CN2502 KP250NA7
CN2503 KP250NA5
R2612 ACN7097 0.05
R2512 ACN7097 0.05
Y12
Y9
L
AMPOUT (SL)
AMPOUT (FL)
HA
HB
OUTPUT-SL ASSY
(AWX7322)
OUTPUT-FL ASSY
(AWX7319)
G
C-AMP-P ASSY
(AWX7317)
CN2604 KM250NA5L
CN2504 KM250NA5L
R2611 47 PUF
Q2604 IRF9540A (S)
R2511 47 PUF
Q2524 IRF9540A (S)
S
D
G

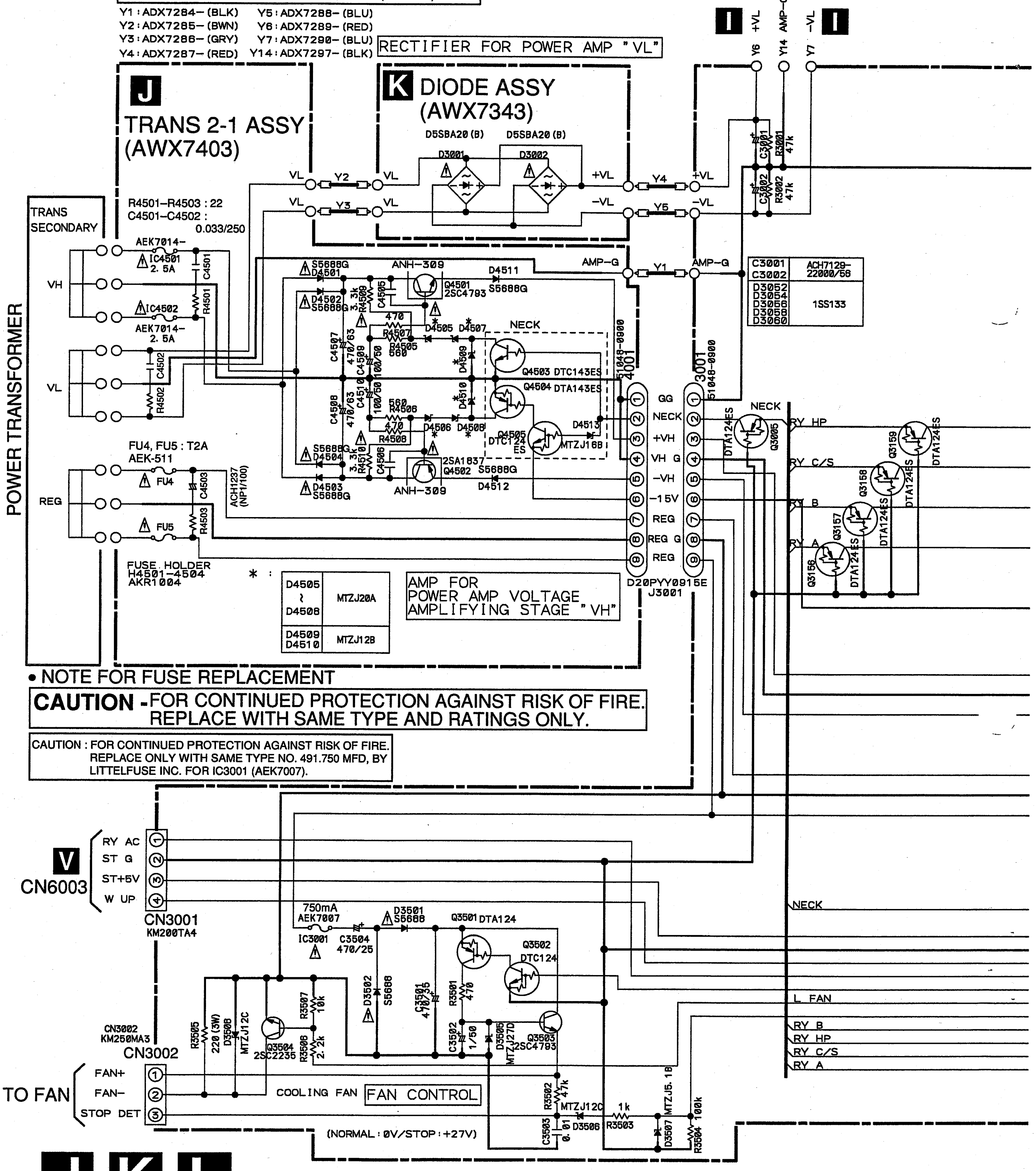
PUF : RD1/4PUF***J-T
NON FRAMABLE TYPE

DIODES WITHOUT INDICATION : 1SS133


: AUDIO SIGNAL ROUTE
POWER AMP
CURRENT
AMPLIFYING STAGE
IRF
C
FR
SR
Q2542 2SC4137
Q2541 IRF540A (S)
R2541 47 PUF
Q2522 2SC4137
Q2521 IRF540A (S)
R2521 47 PUF
Q2622 2SC4137
Q2621 IRF540A (S)
R2621 47 PUF
D G S
JP
R2546 390 PUF
R2526 390 PUF
R2626 390 PUF
D2541
D2542
D2543
D2544
D2521
D2522
D2523
D2524
D2621
D2622
D2623
D2624
R2543 3.6k
R2544 1620
R2523 3.6k
R2524 1620
R2623 3.6k
R2624 1620
VR2541 RCP1134 (220)
VR2521 RCP1134 (220)
VR2621 RCP1134 (220)
R2547 39k
R2548 39k
R2549 3.3k
C2541 0.22/50 NP
R2527 39k
R2528 39k
R2529 3.3k
C2521 0.22/50 NP
R2627 39k
R2628 39k
R2629 3.3k
C2621 0.22/50 NP
Q2543 2SA970
Q2523 2SA970
Q2623 2SA970
R2550 390 PUF
R2530 390 PUF
R2630 390 PUF
R2545 100k
R2525 100k
R2625 100k
CN2541 KM250NA7L
CN2521 KM250NA7L
CN2621 KM250NA8L
O/L+
GATE−
NFB
C-OUT
FR-OUT
SR-OUT
AMP-G
CN2542 KP250NA7
CN2543 KP250NA5
CN2522 KP250NA7
CN2523 KP250NA5
CN2622 KP250NA8
CN2623 KP250NA5
R2552
R2532
R2632
ACN7097
0.05
Y11 AMPOUT (C)
Y10 AMPOUT (FR)
AMP-G Y14
Y13 AMPOUT (SR)
L
HC
HD
HE
OUTPUT-C ASSY (AWX7321)
OUTPUT-FR ASSY (AWX7320)
OUTPUT-SR ASSY (AWX7323)
CN2544 KM250NA5L
CN2524 KM250NA5L
CN2624 KM250NA5L
R2551 47 PUF
Q2544 IRF9540A (S)
R2531 47 PUF
Q2604 IRF9540A (S)
R2631 47 PUF
Q2624 IRF9540A (S)
To N-MOS Sink
KN2011 ANK-142
C2011 1/100
C2012 1/100
Y6 VL+
Y17 GND
Y7 VL−
KN2012 ANK-142
To P-MOS Sink
VL-TERMINAL ASSY (AWX7324)
I

3.10 TRANS 2-1, DIODE and SP/PS ASSYS

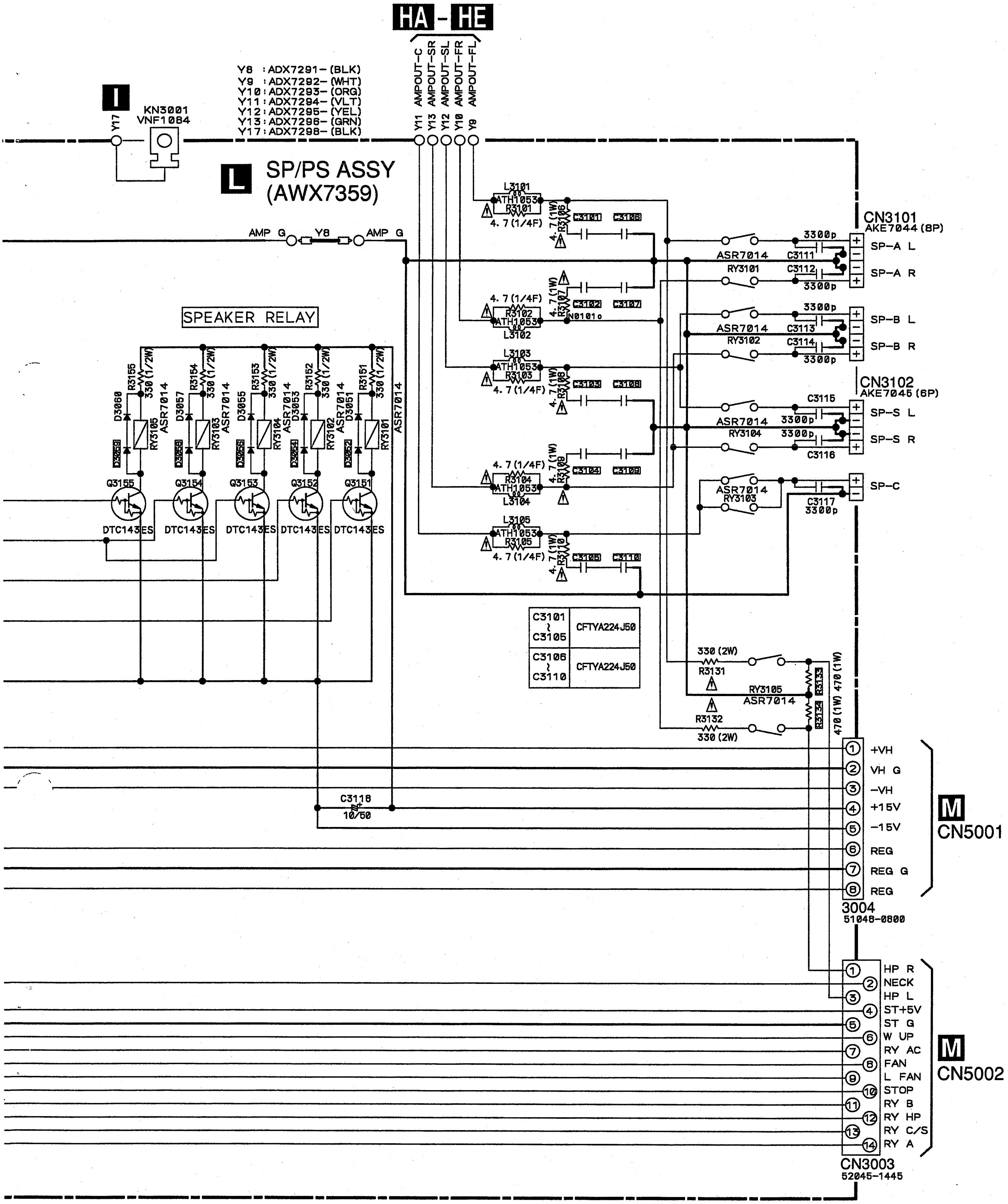
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 49102.5 MFD, BY LITTELFUSE INC. FOR IC4501, IC4502 (AEK7014).


A
B
C
D
Y1 : ADX7284- (BLK)
Y2 : ADX7285- (BWN)
Y3 : ADX7286- (GRY)
Y4 : ADX7287- (RED)
Y5 : ADX7288- (BLU)
Y6 : ADX7289- (RED)
Y7 : ADX7290- (BLU)
Y14 : ADX7297- (BLK)
RECTIFIER FOR POWER AMP "VL"
HE
I
+VL
AMP-G
-VL
Y6
Y14
Y7
J
TRANS 2-1 ASSY
(AWX7403)
K
DIODE ASSY
(AWX7343)
D5SBA20(B)
D5SBA20(B)
D3001
D3002
VL
Y2
Y3
+VL
-VL
Y4
Y5
AMP-G
Y1
C3001
C3002
R3001 47k
R3002 47k
C3001 C3002 ACH7129-22000/56
D3052 D3054 D3056 D3058 D3060 1SS133
TRANS SECONDARY
POWER TRANSFORMER
R4501-R4503 : 22
C4501-C4502 : 0.033/250
AEK7014- IC4501 2.5A
AEK7014- IC4502 2.5A
C4501
R4501
C4502
R4502
VH
VL
REG
FU4, FU5 : T2A
AEK-511
FU4
FU5
C4503
R4503
ACH1237 (NP1/100)
FUSE HOLDER H4501-4504 AKR1004
S5688G D4501
D4502 S5688G
D4503 S5688G
S5688G D4504
ANH-309
Q4501 2SC4793
Q4502 2SA1837
D4511 S5688G
D4512 S5688G
R4503 3.3k
R4510 3.3k
C4505
C4506
C4507 470/63
C4508 470/63
C4509 100/50
C4510 100/50
R4507 470
R4508 470
R4505 560
R4506 560
D4505
D4506
D4507
D4508
D4509
D4510
D4513 MTZJ16B
NECK
Q4503 DTC143ES
Q4504 DTA143ES
Q4505 DTC124ES
51048-0900
4001
3001
51048-0900
GG
NECK
+VH
VH G
-VH
-15V
REG
REG G
REG
D20PYY0915E J3001
D4505 ~ D4508 MTZJ20A
D4509 D4510 MTZJ12B
AMP FOR POWER AMP VOLTAGE AMPLIFYING STAGE "VH"
DTA124ES Q3005
Q3159 DTA124ES
Q3158 DTA124ES
Q3157 DTA124ES
Q3156 DTA124ES
RY HP
RY C/S
RY B
RY A
V
CN6003
RY AC
ST G
ST+5V
W UP
CN3001 KM200TA4
750mA AEK7007
IC3001
C3504 470/25
D3501 S5688
D3502 S5688
Q3501 DTA124
Q3502 DTC124
C3501 470/35
R3501 470
C3502 1/50
D3505 MTZJ27D
Q3503 2SC4793
R3505 220 (3W)
D3508 MTZJ12C
Q3504 2SC2235
R3507 10k
R3508 2.2k
CN3002 KM250MA3
CN3002
TO FAN
FAN+
FAN-
STOP DET
COOLING FAN
FAN CONTROL
R3502 47k
MTZJ12C
D3506
1k R3503
C3503 0.01
MTZJ5.1B
D3507
R3504 100k
(NORMAL : 0V/STOP : +27V)
NECK
L FAN
RY B
RY HP
RY C/S
RY A

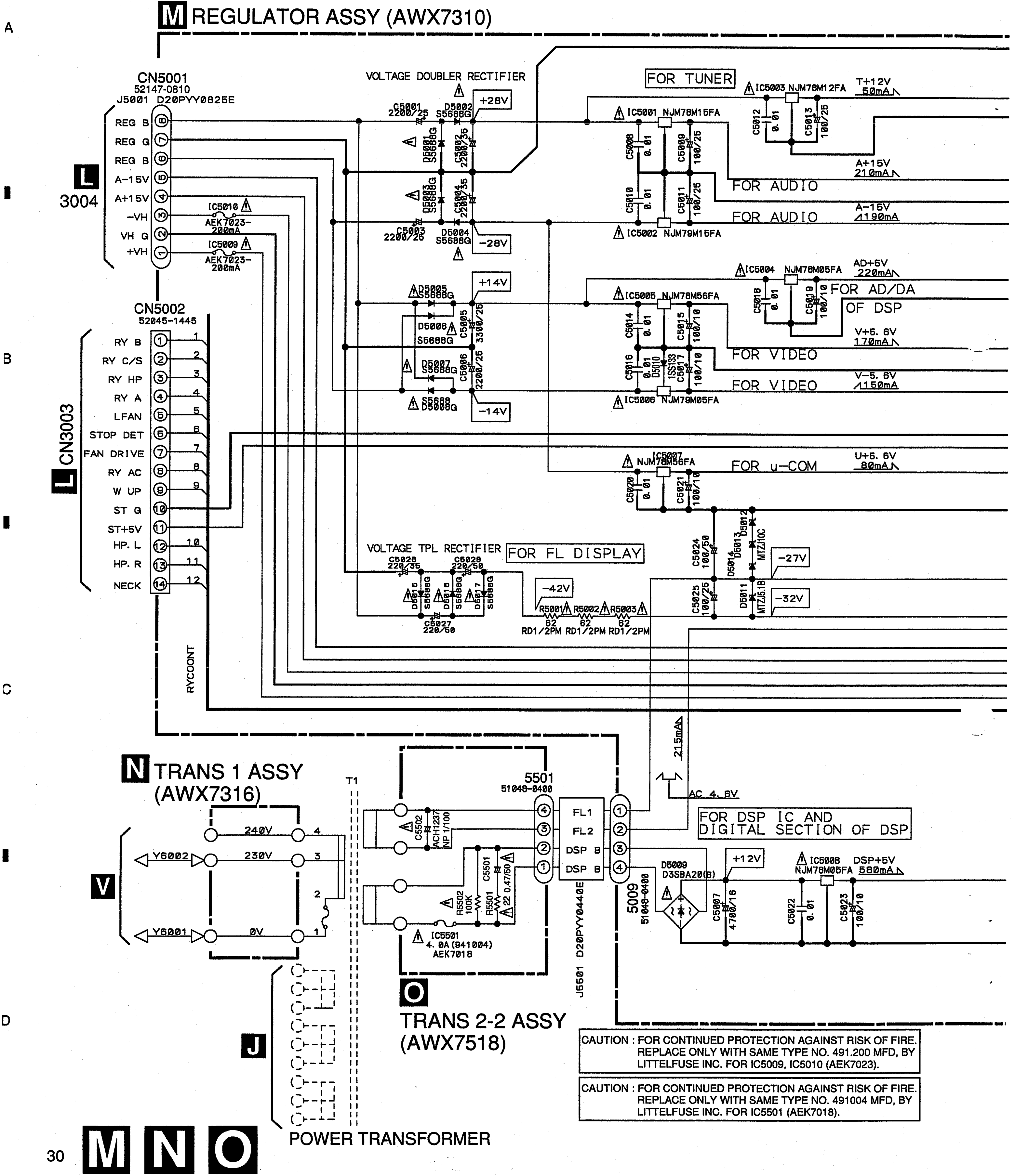
- NOTE FOR FUSE REPLACEMENT

CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.750 MFD, BY LITTELFUSE INC. FOR IC3001 (AEK7007).

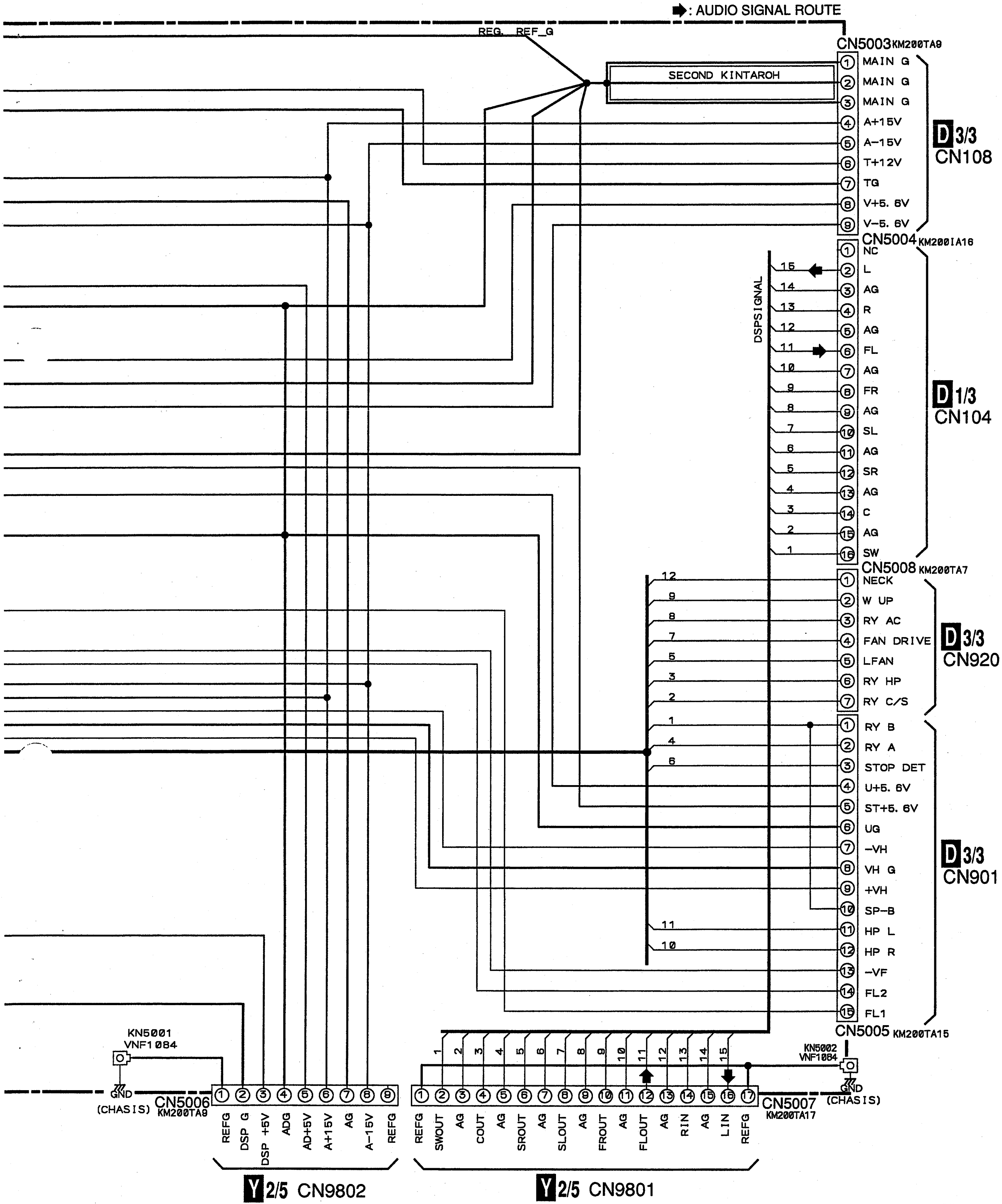

HA - HE
AMPOUT-C
AMPOUT-SR
AMPOUT-SL
AMPOUT-FR
AMPOUT-FL
Y11 Y13 Y12 Y10 Y9
Y8 : ADX7291- (BLK)
Y9 : ADX7292- (WHT)
Y10 : ADX7293- (ORG)
Y11 : ADX7294- (VLT)
Y12 : ADX7295- (YEL)
Y13 : ADX7296- (GRN)
Y17 : ADX7298- (BLK)
I
Y17
KN3001
VNF1084
L
SP/PS ASSY
(AWX7359)
AMP G
Y8
AMP G
SPEAKER RELAY
L3101 ATH1053 R3101 4.7 (1/4F) R3106 4.7 (1W) C3101 C3106
L3102 ATH1053 R3102 4.7 (1/4F) R3107 4.7 (1W) C3102 C3107 N0101o
L3103 ATH1053 R3103 4.7 (1/4F) R3108 4.7 (1W) C3103 C3108
L3104 ATH1053 R3104 4.7 (1/4F) R3109 4.7 (1W) C3104 C3109
L3105 ATH1053 R3105 4.7 (1/4F) R3110 4.7 (1W) C3105 C3110
R3155 330 (1/2W) D3060 D3059 RY3105 ASR7014 Q3155 DTC143ES
R3154 330 (1/2W) D3057 D3058 RY3103 ASR7014 Q3154 DTC143ES
R3153 330 (1/2W) D3055 D3056 RY3104 ASR7014 Q3153 DTC143ES
R3152 330 (1/2W) D3053 D3054 RY3102 ASR7014 Q3152 DTC143ES
R3151 330 (1/2W) D3051 D3052 RY3101 ASR7014 Q3151 DTC143ES
ASR7014 RY3101
ASR7014 RY3102
ASR7014 RY3104
ASR7014 RY3103
C3111 C3112 C3113 C3114 C3115 C3116 C3117
3300p
CN3101 AKE7044 (8P)
SP-A L
SP-A R
SP-B L
SP-B R
CN3102 AKE7045 (6P)
SP-S L
SP-S R
SP-C
C3101 ~ C3105 CFTYA224J50
C3106 ~ C3110 CFTYA224J50
330 (2W) R3131
R3132 330 (2W)
RY3105 ASR7014
R3133 470 (1W)
R3134 470 (1W)
C3118 10/50
① +VH
② VH G
③ −VH
④ +15V
⑤ −15V
⑥ REG
⑦ REG G
⑧ REG
3004 51048-0800
M CN5001
① HP R
② NECK
③ HP L
④ ST+5V
⑤ ST G
⑥ W UP
⑦ RY AC
⑧ FAN
⑨ L FAN
⑩ STOP
⑪ RY B
⑫ RY HP
⑬ RY C/S
⑭ RY A
CN3003 52045-1445
M CN5002
5 6 7 8
A B C D

3.11 REGULATOR, TRANS 1 and TRANS 2-2 ASSYS


M REGULATOR ASSY (AWX7310)
CN5001
52147-0810
J5001 D20PYY0825E
REG B
REG G
REG B
A-15V
A+15V
-VH
VH G
+VH
L
3004
IC5010
AEK7023-200mA
IC5009
AEK7023-200mA
VOLTAGE DOUBLER RECTIFIER
C5001 2200/25
D5002 S5688G
+28V
D5001 S5688G
C5002 2200/35
D5003 S5688G
C5004 2200/35
C5003 2200/25
D5004 S5688G
-28V
FOR TUNER
IC5003 NJM78M12FA
T+12V 50mA
C5012 0.01
C5013 100/25
IC5001 NJM78M15FA
C5008 0.01
C5009 100/25
A+15V 210mA
FOR AUDIO
C5010 0.01
C5011 100/25
A-15V 190mA
FOR AUDIO
IC5002 NJM79M15FA
IC5004 NJM78M05FA
AD+5V 220mA
C5018 0.01
C5019 100/10
FOR AD/DA OF DSP
D5005 S5688G
+14V
D5006 S5688G
C5005 3300/25
IC5005 NJM78M56FA
C5014 0.01
C5015 100/10
V+5.6V 170mA
D5007 S5688G
C5006 2200/25
C5016 0.01
D5010 1SS133
C5017 100/10
FOR VIDEO
V-5.6V 150mA
FOR VIDEO
D5008 S5688G
-14V
IC5006 NJM79M05FA
CN5002
52045-1445
RY B
RY C/S
RY HP
RY A
LFAN
STOP DET
FAN DRIVE
RY AC
W UP
ST G
ST+5V
HP. L
HP. R
NECK
L CN3003
IC5007 NJM78M56FA
FOR u-COM
U+5.6V 80mA
C5020 0.01
C5021 100/10
VOLTAGE TPL RECTIFIER
FOR FL DISPLAY
C5028 220/50
C5026 220/50
D5015 S5688G
D5016 S5688G
D5017 S5688G
C5027 220/50
-42V
R5001 62
R5002 62
R5003 62
RD1/2PM RD1/2PM RD1/2PM
C5024 100/50
C5025 100/25
D5014
D5013
D5012 MTZJ10C
D5011 MTZJ5.1B
-27V
-32V
RYCOONT
215mA
N TRANS 1 ASSY (AWX7316)
T1
240V
230V
0V
Y6002
Y6001
V
4
3
2
1
5501
51048-0400
C5502 ACH1237 NP 1/100
C5501 22 0.47/50
R5502 100K
R5501
IC5501 4.0A (941004) AEK7018
FL1
FL2
DSP B
DSP B
AC 4.6V
FOR DSP IC AND DIGITAL SECTION OF DSP
5009
51048-0400
J5501 D20PYY0440E
D5009 D3SBA20(B)
+12V
C5007 4700/16
IC5008 NJM78M05FA
DSP+5V 580mA
C5022 0.01
C5023 100/10
O TRANS 2-2 ASSY (AWX7518)
J
POWER TRANSFORMER

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.200 MFD, BY LITTELFUSE INC. FOR IC5009, IC5010 (AEK7023).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491004 MFD, BY LITTELFUSE INC. FOR IC5501 (AEK7018).

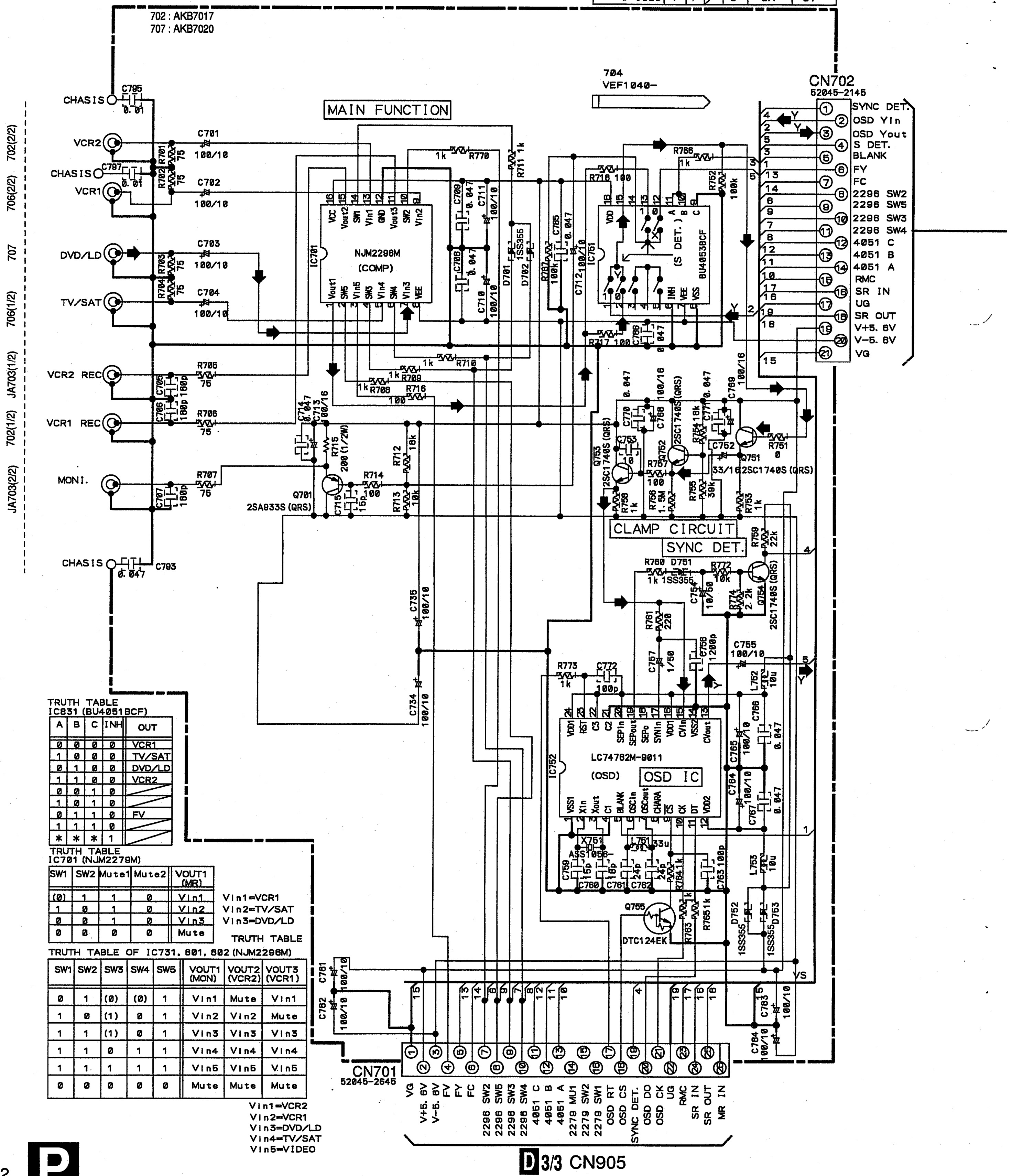

➡: AUDIO SIGNAL ROUTE
REG. REF_G
SECOND KINTAROH
CN5003 KM200TA9
① MAIN G
② MAIN G
③ MAIN G
④ A+15V
⑤ A−15V
⑥ T+12V
⑦ TG
⑧ V+5. 6V
⑨ V−5. 6V
D 3/3 CN108
CN5004 KM200IA16
① NC
② L
③ AG
④ R
⑤ AG
⑥ FL
⑦ AG
⑧ FR
⑨ AG
⑩ SL
⑪ AG
⑫ SR
⑬ AG
⑭ C
⑮ AG
⑯ SW
D 1/3 CN104
DSPSIGNAL
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
CN5008 KM200TA7
① NECK
② W UP
③ RY AC
④ FAN DRIVE
⑤ LFAN
⑥ RY HP
⑦ RY C/S
D 3/3 CN920
12 9 8 7 5 3 2 1 4 6 11 10
① RY B
② RY A
③ STOP DET
④ U+5. 6V
⑤ ST+5. 6V
⑥ UG
⑦ −VH
⑧ VH G
⑨ +VH
⑩ SP−B
⑪ HP L
⑫ HP R
⑬ −VF
⑭ FL2
⑮ FL1
D 3/3 CN901
CN5005 KM200TA15
KN5001 VNF1084
GND (CHASIS)
CN5006 KM200TA9
① REFG
② DSP G
③ DSP +5V
④ ADG
⑤ AD+5V
⑥ A+15V
⑦ AG
⑧ A−15V
⑨ REFG
Y 2/5 CN9802
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
KN5002 VNF1084
GND (CHASIS)
CN5007 KM200TA17
① REFG
② SWOUT
③ AG
④ COUT
⑤ AG
⑥ SROUT
⑦ AG
⑧ SLOUT
⑨ AG
⑩ FROUT
⑪ AG
⑫ FLOUT
⑬ AG
⑭ RIN
⑮ AG
⑯ LIN
⑰ REFG
Y 2/5 CN9801

3.12 VIDEO and S-VIDEO ASSYS

P VIDEO ASSY
(AWX7422)

TRUTH TABLE OF IC751 (BU4053BCF)

CONDITION	A	B	C	INH	X OUT	Y OUT
S NOT USED	0	0		0	1X	1Y
S USED	1	1		0	0X	0Y


702 : AKB7017
707 : AKB7020
CHASIS
C795 0.01
VCR2
C797 0.01
VCR1
DVD/LD
TV/SAT
VCR2 REC
VCR1 REC
MONI.
C793 0.047
702(2/2)
706(2/2)
707
706(1/2)
JA703(1/2)
702(1/2)
JA703(2/2)
C701 100/10
C702 100/10
C703 100/10
C704 100/10
R701 75
R702 75
R703 75
R704 75
R705 75
R706 75
R707 75
C705 180p
C706 180p
C707 180p
MAIN FUNCTION
IC701 NJM2296M (COMP)
VCC Vout2 SW1 Vin1 GND Vout3 SW2 Vin2
Vout1 SW5 Vin5 SW3 Vin4 SW4 Vin3 VEE
R770 1k
R711 1k
R709 1k
R708 1k
R710 1k
R716 100
C709 0.047
C711 100/10
C708 0.047
C710 100/10
D701 1SS355
D702 1SS355
C713 100/16
C714 0.047
R715 200(1/2W)
Q701 2SA933S(QRS)
C715 15p
R714 100
R712 18k
R713 10k
C735 100/10
C734 100/10
704 VEF1040-
R766 1k
R718 100
R767 100k
C785 0.047
C712 100/10
IC751 BU4053BCF (S DET.)
VDD A B C INH VEE VSS
R752 100k
R717 100
C786 0.047
C770 0.047
C768 100/16
Q753 2SC1740S(QRS)
Q752 2SC1740S(QRS)
Q751 2SC1740S(QRS)
C753 10
R754 18k
C771 0.047
C769 100/16
C752 33/16
R751 0
R757 100
R758 1k
R756 1.5M
R755 39k
R753 1k
CLAMP CIRCUIT
SYNC DET.
R759 22k
R760 1k
D751 1SS355
R772 10k
C754 10/50
R774 2.2k
Q754 2SC1740S(QRS)
R761 220
C757 1/50
C756 1200p
C755 100/10
L752 10u
R773 1k
C772 100p
IC752 LC74782M-9011 (OSD)
OSD IC
VDD1 RST C3 C2 SEPin SEPout SEPc SYNin VDD1 CVin VSS2 CVout
VSS1 Xin Xout C1 BLANK OSCin OSCout CHARA CS CK DT VDD2
C766 0.047
C765 100/10
C764 100/10
C767 0.047
X751 ASS1056-
L751 33u
C759 15p
C760 18p
C761 24p
C762 24p
R764 1k
C763 100p
L753 10u
Q755 DTC124EK
R763 1k
R765 1k
D752 1SS355
D753 1SS355
C781 100/10
C782 100/10
C783 100/10
C784 100/10
VS
CN702
52045-2145
SYNC DET.
OSD YIn
OSD Yout
S DET.
BLANK
FY
FC
2296 SW2
2296 SW5
2296 SW3
2296 SW4
4051 C
4051 B
4051 A
RMC
SR IN
UG
SR OUT
V+5.6V
V-5.6V
VG
CN701
52045-2645
VG
V+5.6V
V-5.6V
FV
FY
FC
2296 SW2
2296 SW5
2296 SW3
2296 SW4
4051 C
4051 B
4051 A
2279 MU1
2279 SW2
2279 SW1
OSD RT
OSD CS
SYNC DET.
OSD DO
OSD CK
UG
RMC
SR IN
SR OUT
MR IN
D 3/3 CN905

TRUTH TABLE
IC831 (BU4051BCF)

A	B	C	INH	OUT
0	0	0	0	VCR1
1	0	0	0	TV/SAT
0	1	0	0	DVD/LD
1	1	0	0	VCR2
0	0	1	0	
1	0	1	0	
0	1	1	0	FV
1	1	1	0	
*	*	*	1	

TRUTH TABLE
IC701 (NJM2279M)

SW1	SW2	Mute1	Mute2	VOUT1 (MR)
(0)	1	1	0	Vin1
1	0	1	0	Vin2
0	0	1	0	Vin3
0	0	0	0	Mute

Vin1=VCR1
Vin2=TV/SAT
Vin3=DVD/LD

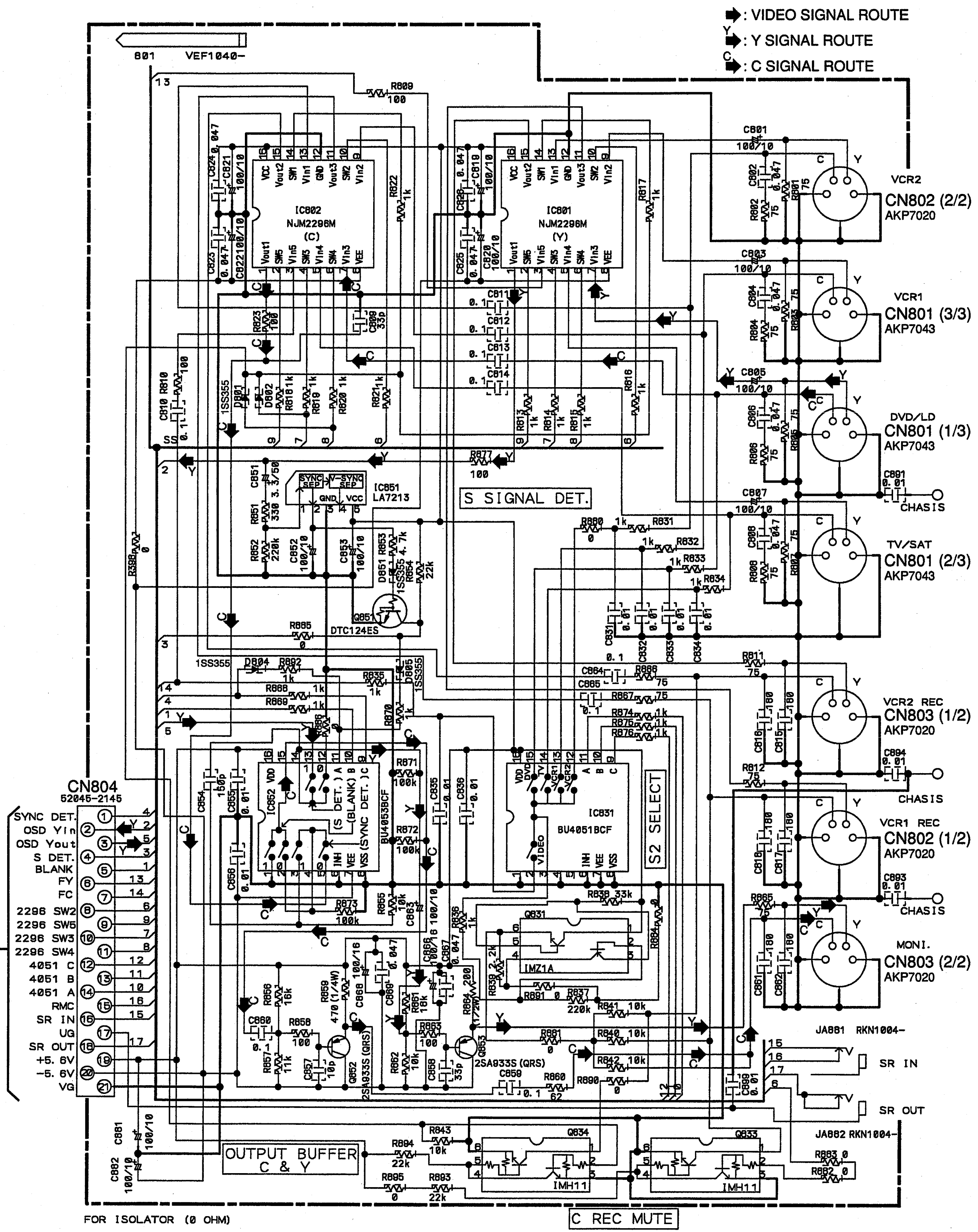
TRUTH TABLE

TRUTH TABLE OF IC731, 801, 802 (NJM2296M)

SW1	SW2	SW3	SW4	SW5	VOUT1 (MON)	VOUT2 (VCR2)	VOUT3 (VCR1)
0	1	(0)	(0)	1	Vin1	Mute	Vin1
1	0	(1)	0	1	Vin2	Vin2	Mute
1	1	(1)	0	1	Vin3	Vin3	Vin3
1	1	0	1	1	Vin4	Vin4	Vin4
1	1	1	1	1	Vin5	Vin5	Vin5
0	0	0	0	0	Mute	Mute	Mute

Vin1=VCR2
Vin2=VCR1
Vin3=DVD/LD
Vin4=TV/SAT
Vin5=VIDEO

Q S-VIDEO ASSY
(AWX7395)

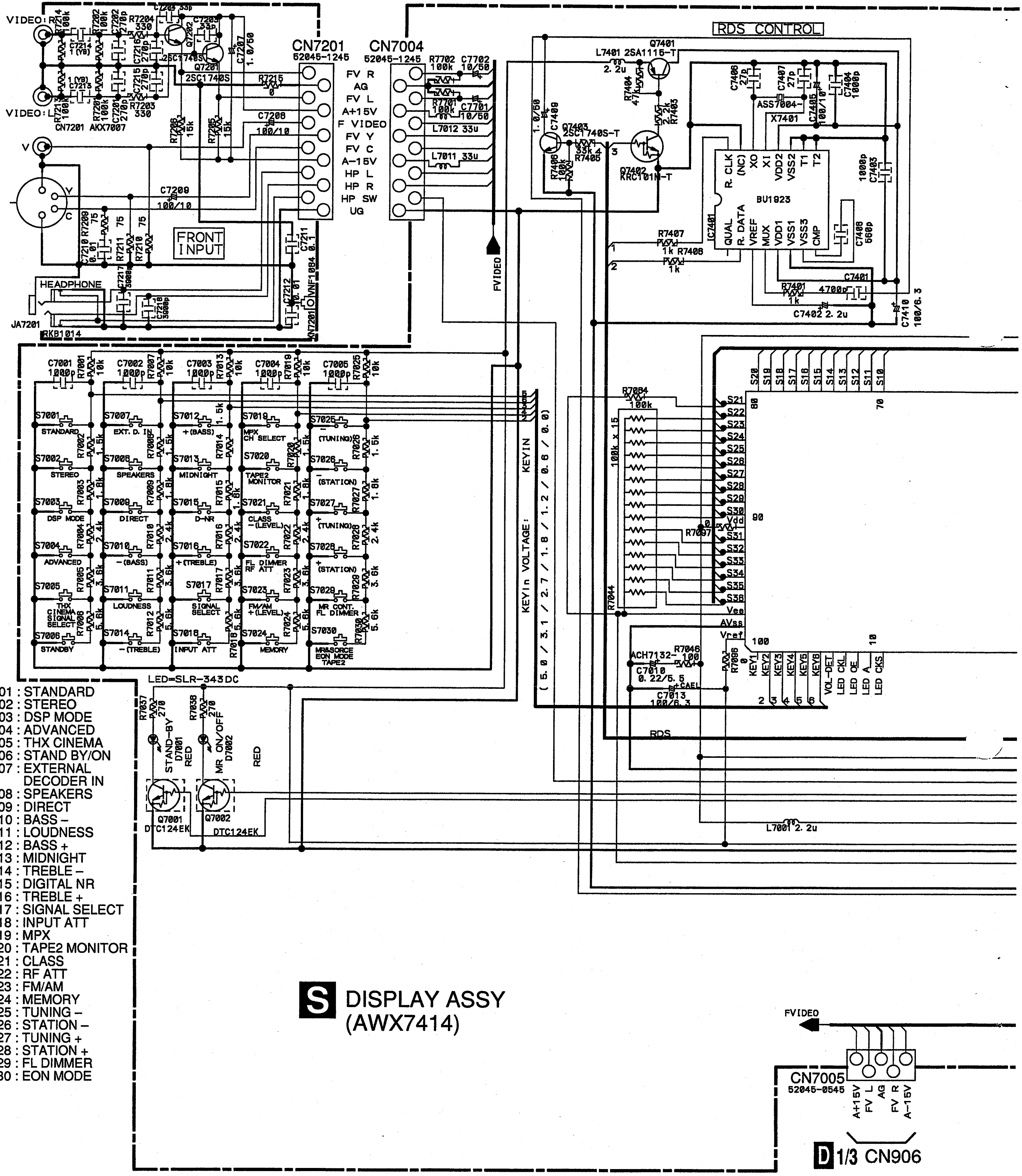

: VIDEO SIGNAL ROUTE
Y: Y SIGNAL ROUTE
C: C SIGNAL ROUTE
801 VEF1040-
IC802 NJM2296M (C)
IC801 NJM2296M (Y)
VCC Vout2 SW1 Vin1 GND Vout3 SW2 Vin2
Vout1 SW5 Vin5 SW3 Vin4 SW4 Vin3 VEE
IC851 LA7213
SYNC SEP
V-SYNC SEP
GND VCC
S SIGNAL DET.
Q851 DTC124ES
IC852 BU4053BCF
(S DET.) A
(BLANK) B
(SYNC DET.) C
INH VEE VSS
IC831 BU4051BCF
S2 SELECT
Q831 IMZ1A
Q852 2SA933S (QRS)
Q853 2SA933S (QRS)
Q834 IMH11
Q833 IMH11
OUTPUT BUFFER C & Y
C REC MUTE
CN804 52045-2145
SYNC DET. ①
OSD Yin ②
OSD Yout ③
S DET. ④
BLANK ⑤
FY ⑥
FC ⑦
2296 SW2 ⑧
2296 SW5 ⑨
2296 SW3 ⑩
2296 SW4 ⑪
4051 C ⑫
4051 B ⑬
4051 A ⑭
RMC ⑮
SR IN ⑯
UG ⑰
SR OUT ⑱
+5.6V ⑲
−5.6V ⑳
VG ㉑
VCR2 CN802 (2/2) AKP7020
VCR1 CN801 (3/3) AKP7043
DVD/LD CN801 (1/3) AKP7043
TV/SAT CN801 (2/3) AKP7043
VCR2 REC CN803 (1/2) AKP7020
VCR1 REC CN802 (1/2) AKP7020
MONI. CN803 (2/2) AKP7020
CHASIS
JA881 RKN1004-
SR IN
SR OUT
JA882 RKN1004-
C Y

FOR ISOLATOR (0 OHM)

R771 R887
R775 R888
R776 R889
R777
R778

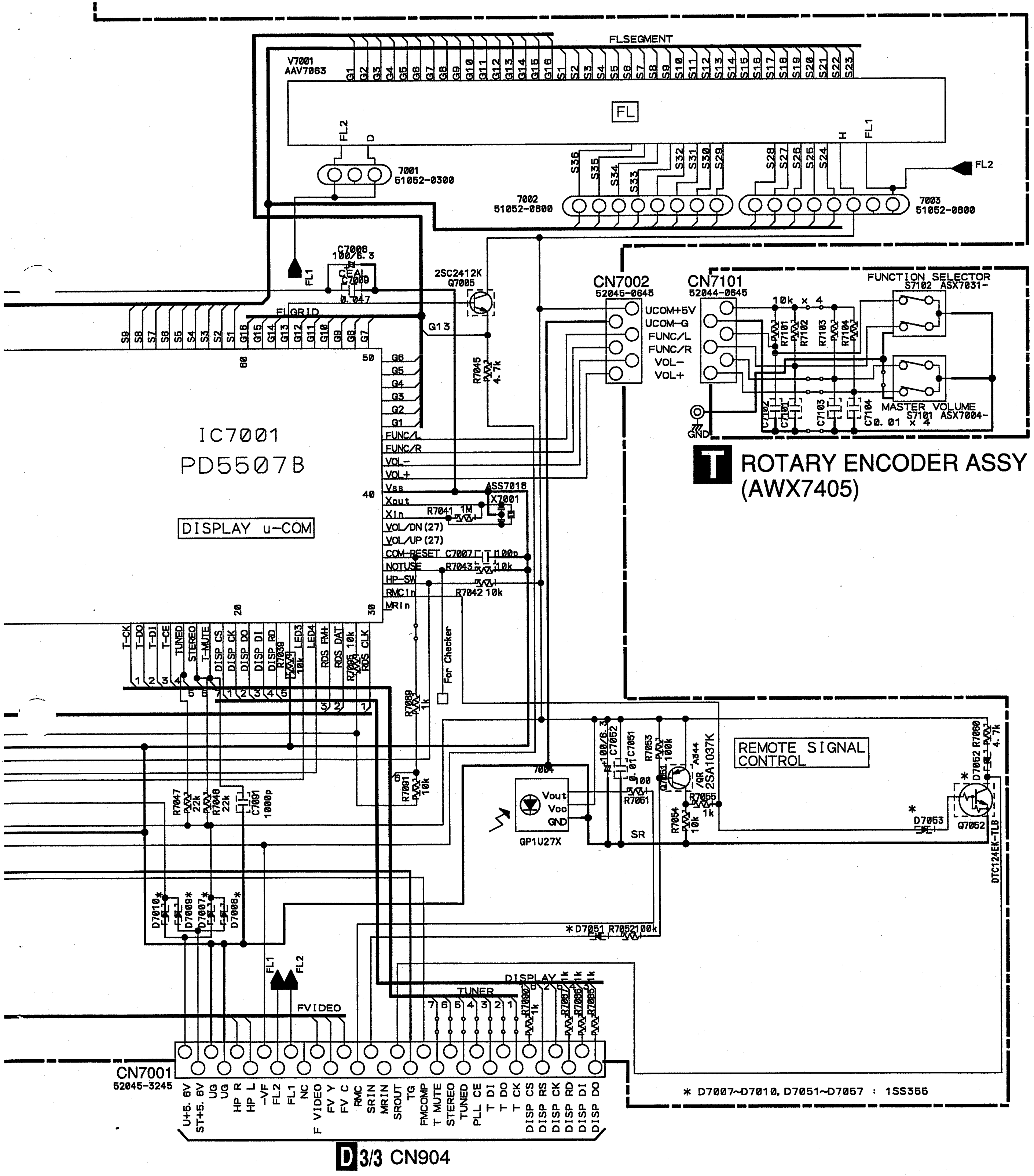
3.13 H. PHONE/F. VIDEO, DISPLAY and ROTARY ENCODER ASSYS

R H. PHONE/F. VIDEO ASSY
(AWX7342)

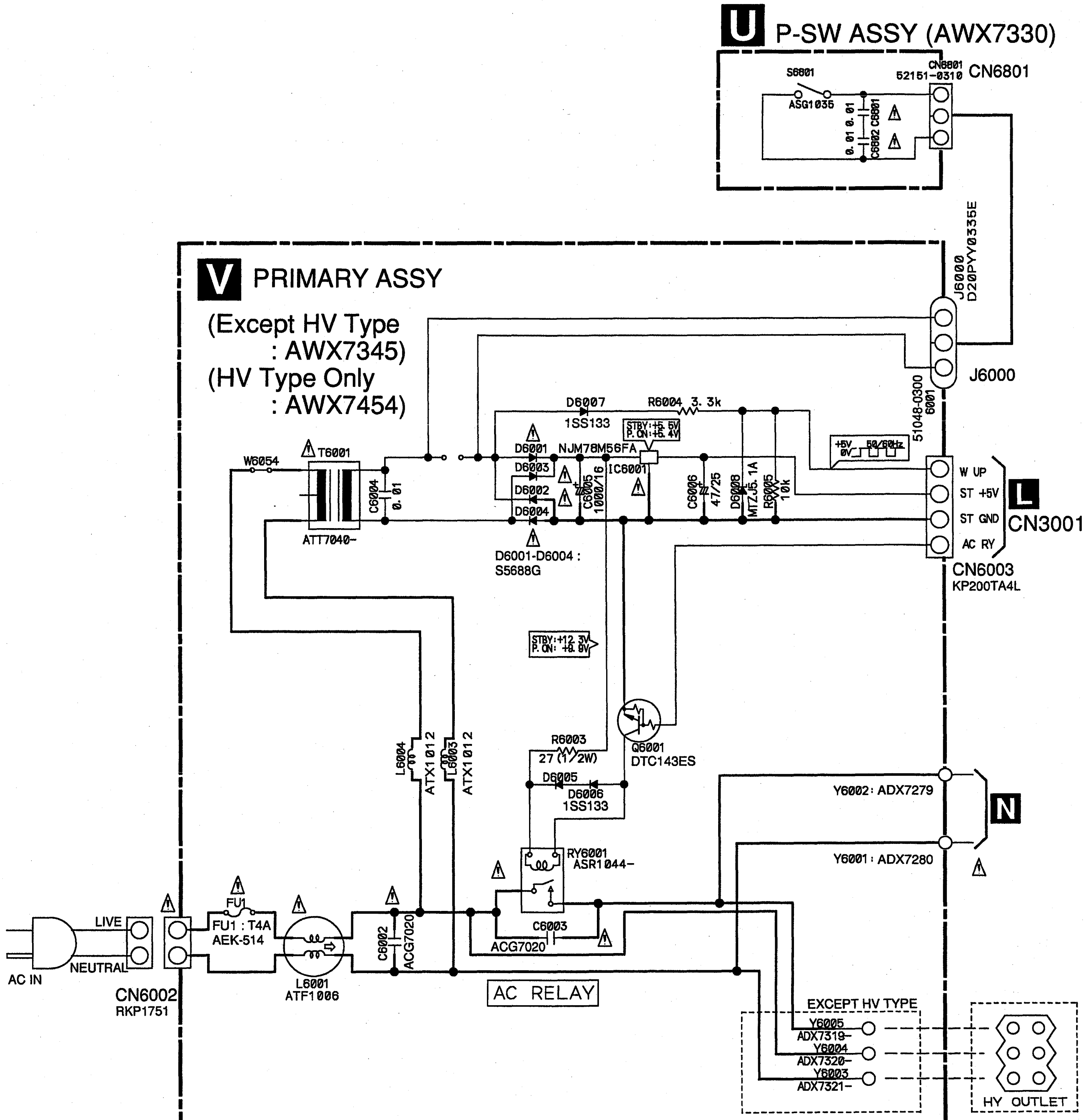

VIDEO R
VIDEO L
CN7201 AKX7007
V
Y
C
FRONT INPUT
HEADPHONE
JA7201
RKB1014
CN7201
52045-1245
CN7004
52045-1245
FV R
AG
FV L
A+15V
F VIDEO
FV Y
FV C
A-15V
HP L
HP R
HP SW
UG
Q7201 2SC1740S
Q7202 2SC1740S
FVIDEO
RDS CONTROL
Q7401 2SA1115-T
L7401 2.2u
Q7403 2SC1740S-T
Q7402 KRC101N-T
X7401
BU1923
R. CLK
(NC)
XO
XI
VDD2
VSS2
T1
T2
QUAL
R. DATA
VREF
MUX
VDD1
VSS1
VSS3
CMP
KEYIN
KEYIn VOLTAGE:
(5.0 / 3.1 / 2.7 / 1.8 / 1.2 / 0.6 / 0.0)
100k x 15
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29
S30
Vdd
S31
S32
S33
S34
S35
S36
Vee
AVss
Vref
KEY1
KEY2
KEY3
KEY4
KEY5
KEY6
VOL-DET
LED CKL
LED OE
LED A
LED CKS
ACH7132
RDS
L7001 2.2u
LED=SLR-343DC
STAND-BY D7001 RED
MR ON/OFF D7002 RED
Q7001 DTC124EK
Q7002 DTC124EK
STANDARD
STEREO
DSP MODE
ADVANCED
THX CINEMA SIGNAL SELECT
STANDBY
EXT. D. IF
SPEAKERS
DIRECT
-(BASS)
LOUDNESS
-(TREBLE)
+(BASS)
MIDNIGHT
D-NR
+(TREBLE)
SIGNAL SELECT
INPUT ATT
MPX CH SELECT
TAPE2 MONITOR
CLASS -(LEVEL)
FL DIMMER RF ATT
FM/AM +(LEVEL)
MEMORY
-(TUNING)
-(STATION)
+(TUNING)
+(STATION)
MR CONT. FL DIMMER
MR&SORCE EON MODE TAPE2
FVIDEO
CN7005
52045-0545
A+15V
FV L
AG
FV R
A-15V
D 1/3 CN906

S7001 : STANDARD
S7002 : STEREO
S7003 : DSP MODE
S7004 : ADVANCED
S7005 : THX CINEMA
S7006 : STAND BY/ON
S7007 : EXTERNAL DECODER IN
S7008 : SPEAKERS
S7009 : DIRECT
S7010 : BASS –
S7011 : LOUDNESS
S7012 : BASS +
S7013 : MIDNIGHT
S7014 : TREBLE –
S7015 : DIGITAL NR
S7016 : TREBLE +
S7017 : SIGNAL SELECT
S7018 : INPUT ATT
S7019 : MPX
S7020 : TAPE2 MONITOR
S7021 : CLASS
S7022 : RF ATT
S7023 : FM/AM
S7024 : MEMORY
S7025 : TUNING –
S7026 : STATION –
S7027 : TUNING +
S7028 : STATION +
S7029 : FL DIMMER
S7030 : EON MODE

S DISPLAY ASSY
(AWX7414)

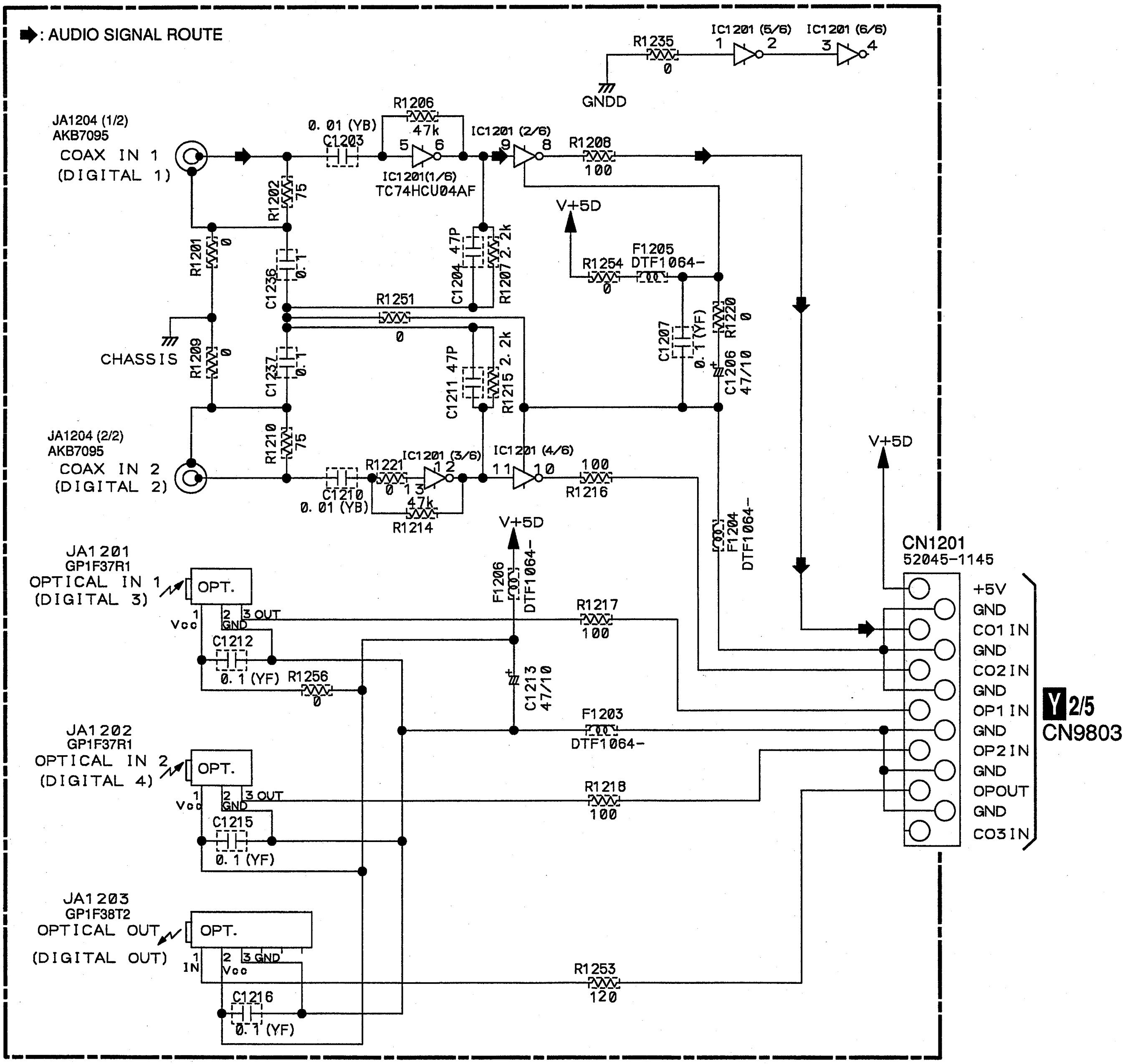

FLSEGMENT
V7001
AAV7063
G1 G2 G3 G4 G5 G6 G7 G8 G9 G10 G11 G12 G13 G14 G15 G16
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23
FL
FL2
D
H
FL1
7001
51052-0300
S36 S35 S34 S33 S32 S31 S30 S29 S28 S27 S26 S25 S24
7002
51052-0800
7003
51052-0800
FL2
C7008
100/6.3
CERAMIC
C7009
0.047
FL1
2SC2412K
Q7005
FLGRID
G13
S9 S8 S7 S6 S5 S4 S3 S2 S1 G16 G15 G14 G13 G12 G11 G10 G9 G8 G7
60
50
G6 G5 G4 G3 G2 G1
IC7001
PD5507B
DISPLAY u-COM
FUNC/L
FUNC/R
VOL−
VOL+
Vss
Xout
XIn
VOL/DN (27)
VOL/UP (27)
COM-RESET
NOTUSE
HP-SW
RMCIn
MRIn
40
R7045
4.7k
ASS7018
X7001
R7041 1M
C7007 100p
R7043 10k
R7042 10k
For Checker
R7089
1k
T-CK T-DO T-DI T-CE TUNED STEREO T-MUTE DISP CS DISP CK DISP DO DISP DI DISP RD LED3 LED4 RDS FM+ RDS DAT RDS CLK
20
30
R7039
10k
R7095 10k
1 2 3 4 5 6 7 1 2 3 4 5
3 2 1
CN7002
52045-0645
UCOM+5V
UCOM-G
FUNC/L
FUNC/R
VOL−
VOL+
CN7101
52044-0645
10k × 4
R7101 R7102 R7103 R7104
FUNCTION SELECTOR
S7102 ASX7031-
MASTER VOLUME
S7101 ASX7004-
C7101 C7102 C7103 C7104
0.01 × 4
GND
T
ROTARY ENCODER ASSY
(AWX7405)
REMOTE SIGNAL
CONTROL
7004
Vout
Vcc
GND
GP1U27X
C7052
100/6.3
C7051
0.01
R7053
100k
R7051
100
Q7051
2SA1037K
A344
/QR
R7055
1k
R7054
10k
SR
R7060
4.7k
D7052
D7053
Q7052
DTC124EK-TLB
R7091
10k
R7047
22k
R7048
22k
C7001
1000p
D7010 D7009 D7007 D7008
*D7051 R7052 100k
FL1
FL2
FVIDEO
TUNER
DISPLAY
7 6 5 4 3 2 1
6 5 2 4 1
R7090 1k
R7087 1k
R7086 1k
R7085 1k
R7088 1k
CN7001
52045-3245
U+5.6V ST+5.6V UG UG HP R HP L −VF FL2 FL1 NC F VIDEO FV Y FV C RMC SRIN MRIN SROUT TG FMCOMP T MUTE STEREO TUNED PLL CE T DI T DO T CK DISP CS DISP RS DISP CK DISP RD DISP DI DISP DO
* D7007~D7010, D7051~D7057 : 1SS355
D 3/3 CN904

3.14 PRIMARY and P-SW ASSY

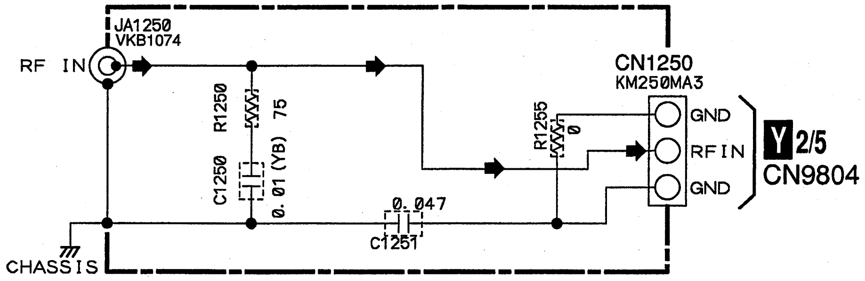

U P-SW ASSY (AWX7330)
S6801
ASG1035
0.01 C6801
0.01 C6802
CN6801 52151-0310
CN6801
J6000 D20PYY0335E
V PRIMARY ASSY
(Except HV Type : AWX7345)
(HV Type Only : AWX7454)
J6000
51048-0300 6001
D6007 1SS133
R6004 3.3k
STBY:+5.5V P.ON:+5.4V
D6001 NJM78M56FA
D6003
D6002
D6004
C6005 1000/16
IC6001
C6006 47/25
D6008 MTZJ5.1A
R6005 10k
+5V 0V 50/60Hz
W UP
ST +5V
ST GND
AC RY
L
CN3001
CN6003
KP200TA4L
W6054
T6001
ATT7040-
C6004 0.01
D6001-D6004 : S5688G
STBY:+12.3V P.ON: +9.9V
L6004 ATX1012
L6003 ATX1012
R6003 27 (1/2W)
D6005
D6006 1SS133
Q6001 DTC143ES
Y6002: ADX7279
N
Y6001: ADX7280
RY6001 ASR1044-
LIVE
NEUTRAL
AC IN
CN6002 RKP1751
FU1
FU1 : T4A AEK-514
L6001 ATF1006
C6002 ACG7020
C6003 ACG7020
AC RELAY
EXCEPT HV TYPE
Y6005 ADX7319-
Y6004 ADX7320-
Y6003 ADX7321-
HY OUTLET

3.15 DIGITAL-I/O and RF TERMINAL ASSYS

W DIGITAL-I/O ASSY (AWX7396)

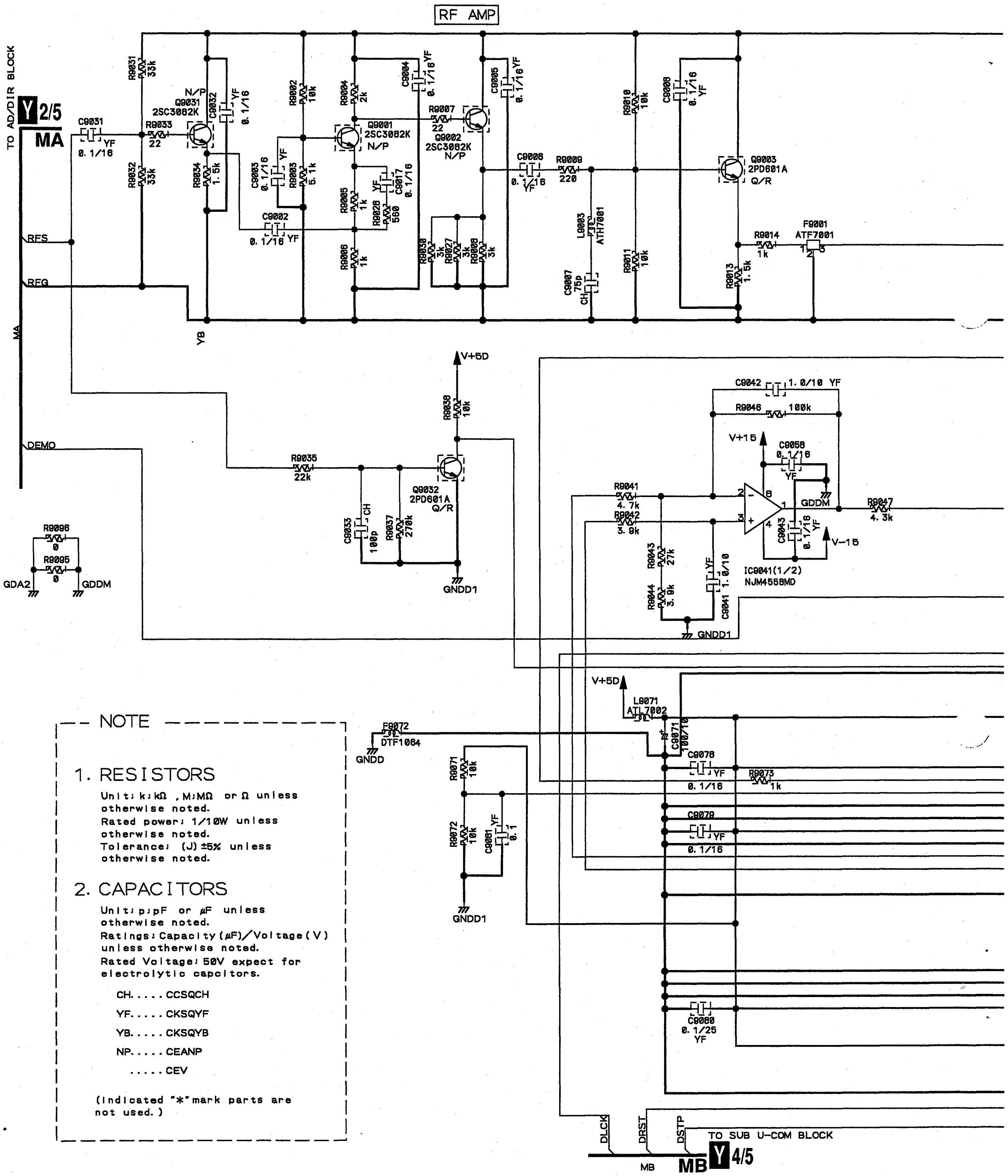

: AUDIO SIGNAL ROUTE
R1235
0
GNDD
IC1201 (5/6)
IC1201 (6/6)
1 2 3 4
JA1204 (1/2)
AKB7095
COAX IN 1
(DIGITAL 1)
R1206
47k
0.01 (YB)
C1203
5 6
IC1201(1/6)
TC74HCU04AF
IC1201 (2/6)
9 8
R1208
100
R1202 75
R1201 0
C1236 0.1
C1204 47P
R1207 2.2k
V+5D
F1205
DTF1064-
R1254 0
R1251
0
C1207 0.1 (YF)
R1220 0
C1206 47/10
CHASSIS
R1209 0
C1237 0.1
C1211 47P
R1215 2.2k
R1210 75
JA1204 (2/2)
AKB7095
COAX IN 2
(DIGITAL 2)
C1210
0.01 (YB)
R1221
0
IC1201 (3/6)
12 13
47k
R1214
IC1201 (4/6)
11 10
100
R1216
F1204
DTF1064-
V+5D
JA1201
GP1F37R1
OPTICAL IN 1
(DIGITAL 3)
OPT.
Vcc 1
2 GND
3 OUT
C1212
0.1 (YF)
R1256
0
V+5D
F1206
DTF1064-
R1217
100
C1213 47/10
F1203
DTF1064-
JA1202
GP1F37R1
OPTICAL IN 2
(DIGITAL 4)
OPT.
Vcc 1
2 GND
3 OUT
C1215
0.1 (YF)
R1218
100
JA1203
GP1F38T2
OPTICAL OUT
(DIGITAL OUT)
OPT.
IN 1
2 Vcc
3 GND
C1216
0.1 (YF)
R1253
120
CN1201
52045-1145
+5V
GND
CO1 IN
GND
CO2 IN
GND
OP1 IN
GND
OP2 IN
GND
OPOUT
GND
CO3 IN
Y 2/5
CN9803

X RF TERMINAL ASSY (AWX7376)


JA1250
VKB1074
RF IN
R1250 75
C1250 0.01 (YB)
0.047
C1251
R1255 0
CHASSIS
CN1250
KM250MA3
GND
RF IN
GND
Y 2/5
CN9804

3.16 DSP ASSY (1/5)

Y 1/5 DSP ASSY
(AWX7272)


RF AMP
TO AD/DIR BLOCK
Y 2/5
MA
RFS
RFG
DEMO
YB
C9031 0.1/16 YF
R9033 22
R9031 33k
R9032 33k
Q9031 2SC3082K N/P
C9032 YF 0.1/16
R9034 1.5k
R9002 10k
R9003 5.1k
C9003 0.1/16 YF
C9002 0.1/16 YF
R9004 2k
Q9001 2SC3082K N/P
R9005 1k
R9020 560
C9017 YF 0.1/16
R9006 1k
C9004 0.1/16 YF
R9007 22
Q9002 2SC3082K N/P
C9005 0.1/16 YF
R9030 3k
R9027 3k
R9008 3k
C9006 0.1/16 YF
R9009 220
L9003 ATH7001
C9007 75p CH
R9010 10k
R9011 10k
C9008 0.1/16 YF
Q9003 2PD601A Q/R
R9014 1k
R9013 1.5k
F9001 ATF7001
V+5D
R9038 10k
R9035 22k
Q9032 2PD601A Q/R
C9033 CH 100p
R9037 270k
GNDD1
R9096 0
R9095 0
GDA2
GDDM
C9042 1.0/10 YF
R9046 100k
V+15
C9058 0.1/16 YF
GDDM
R9041 4.7k
R9042 3.9k
R9047 4.3k
C9043 0.1/16 YF
V-15
R9043 27k
R9044 3.9k
C9041 1.0/10 YF
IC9041(1/2) NJM4558MD
GNDD1
V+5D
L9071 ATL7002
F9072 DTF1064
GNDD
C9071 100/10
C9078 0.1/16 YF
R9073 1k
R9071 10k
R9072 10k
C9081 YF 0.1
GNDD1
C9079 0.1/16 YF
C9080 0.1/25 YF
DLCK
DRST
DSTP
TO SUB U-COM BLOCK
MB
MB Y 4/5

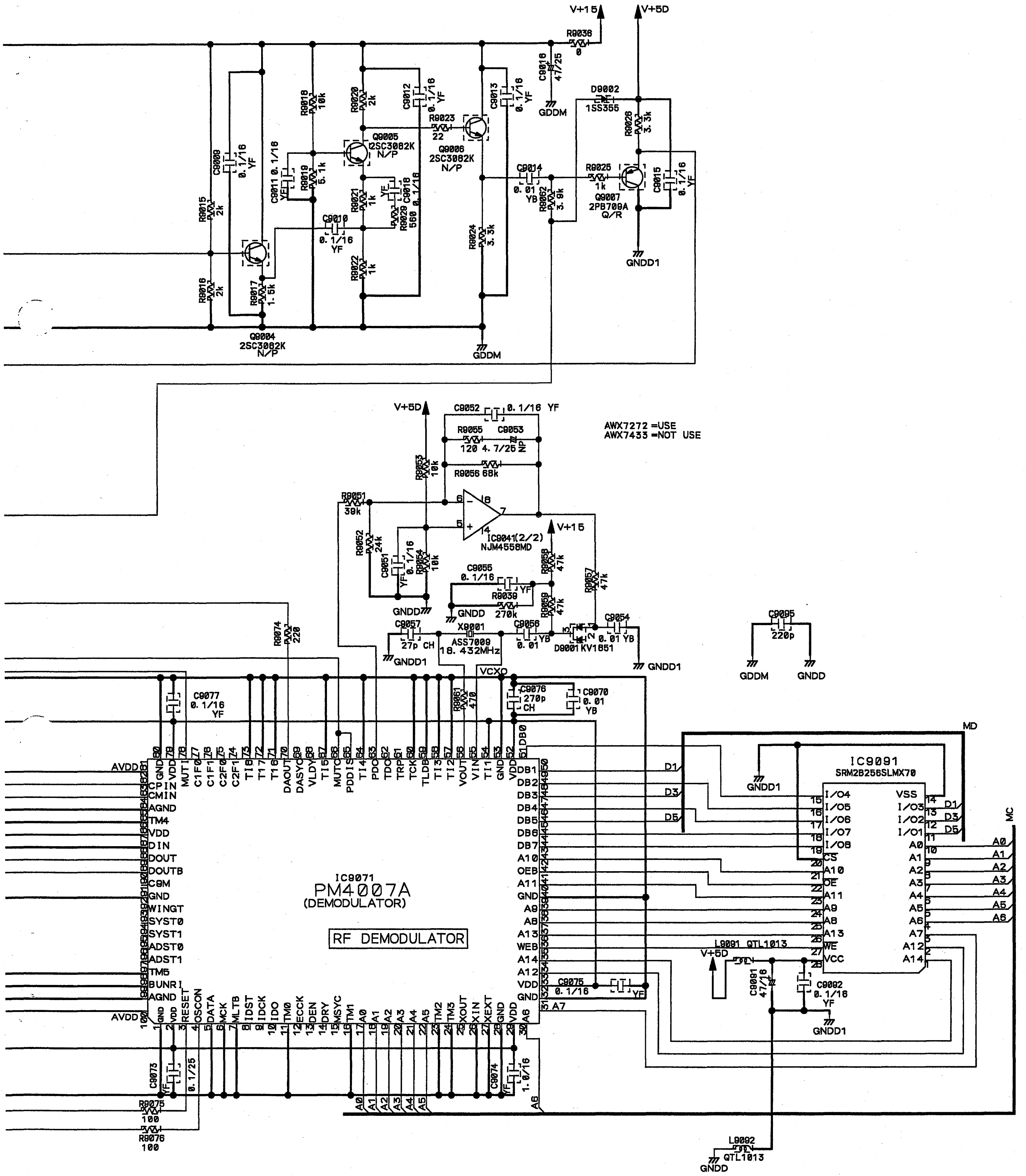
NOTE

1. RESISTORS
Unit: k: kΩ , M: MΩ or Ω unless otherwise noted.
Rated power: 1/10W unless otherwise noted.
Tolerance: (J) ±5% unless otherwise noted.

2. CAPACITORS
Unit: p: pF or µF unless otherwise noted.
Ratings: Capacity(µF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capcitors.

CH.....CCSQCH
YF.....CKSQYF
YB.....CKSQYB
NP.....CEANP
.....CEV

(Indicated "*"mark parts are not used.)


V+15
V+5D
R9038 0
C9016 47/25
GDDM
D9002 1SS355
R9026 3.3k
C9015 0.1/16 YF
R9025 1k
Q9007 2PB709A Q/R
GNDD1
R9018 10k
R9020 2k
C9012 0.1/16 YF
R9023 22
C9013 0.1/16 YF
Q9005 2SC3062K N/P
Q9006 2SC3062K N/P
C9014 0.01 YB
R9062 3.9k
C9009 0.1/16 YF
C9011 0.1/16 YF
R9019 5.1k
R9021 1k
R9029 560
C9018 0.1/16 YF
R9015 2k
C9010 0.1/16 YF
R9024 3.3k
R9022 1k
R9016 2k
R9017 1.5k
Q9004 2SC3062K N/P
GDDM
V+5D
C9052 0.1/16 YF
R9055 120
C9053 4.7/25 NP
R9053 10k
R9056 68k
R9051 39k
R9052 24k
C9051 0.1/16 YF
R9054 10k
IC9041(2/2) NJM4558MD
V+15
R9058 47k
C9055 0.1/16 YF
R9039 270k
R9059 47k
R9057 47k
GNDD
GNDD
C9057 27p CH
X9001 ASS7009 18.432MHz
C9056 0.01 YB
D9001 KV1851
C9054 0.01 YB
GNDD1
GNDD1
AWX7272 =USE
AWX7433 =NOT USE
C9095 220p
GDDM
GNDD
R9074 220
VCXO
C9077 0.1/16 YF
R9061 470
C9076 270p CH
C9070 0.01 YB
IC9071 PM4007A (DEMODULATOR)
RF DEMODULATOR
AVDD
GND VDD MUT1 C1F0 C1F1 C2F0 C2F1 T18 T17 T16 DAOUT DASYC VLDY T15 MUTO PDDIS T14 PDO TDO TRP TCK TLDB T13 T12 VOUT VIN T11 GND VDD DB0
CPIN CMIN AGND TM4 VDD DIN DOUT DOUTB C8M GND WINGT SYST0 SYST1 ADST0 ADST1 TM5 BUNR1 AGND
DB1 DB2 DB3 DB4 DB5 DB6 DB7 A10 OEB A11 GND A9 A8 A13 WEB A14 A12 VDD A6
GND VDD RESET OSCON DATA MCK MLTB IDST IDCK IDO TM0 ECCK DEN DRY MSYC TM1 A0 A1 A2 A3 A4 A5 TM2 TM3 XOUT XIN XEXT GND VDD A6
C9075 0.1/16 YF
A7
C9073 0.1/25 YF
R9075 100
R9076 100
C9074 1.0/16
A0 A1 A2 A3 A4 A5 A6
MD
D1 D3 D5
IC9091 SRM2B256SLMX70
GNDD1
I/O4 I/O5 I/O6 I/O7 I/O8 CS A10 OE A11 A9 A8 A13 WE VCC
VSS I/O3 I/O2 I/O1 A0 A1 A2 A3 A4 A5 A6 A7 A12 A14
D1 D3 D5
MC
A0 A1 A2 A3 A4 A5 A6
L9091 QTL1013
V+5D
C9091 47/16
C9092 0.1/16 YF
GNDD1
L9092 QTL1013
GNDD

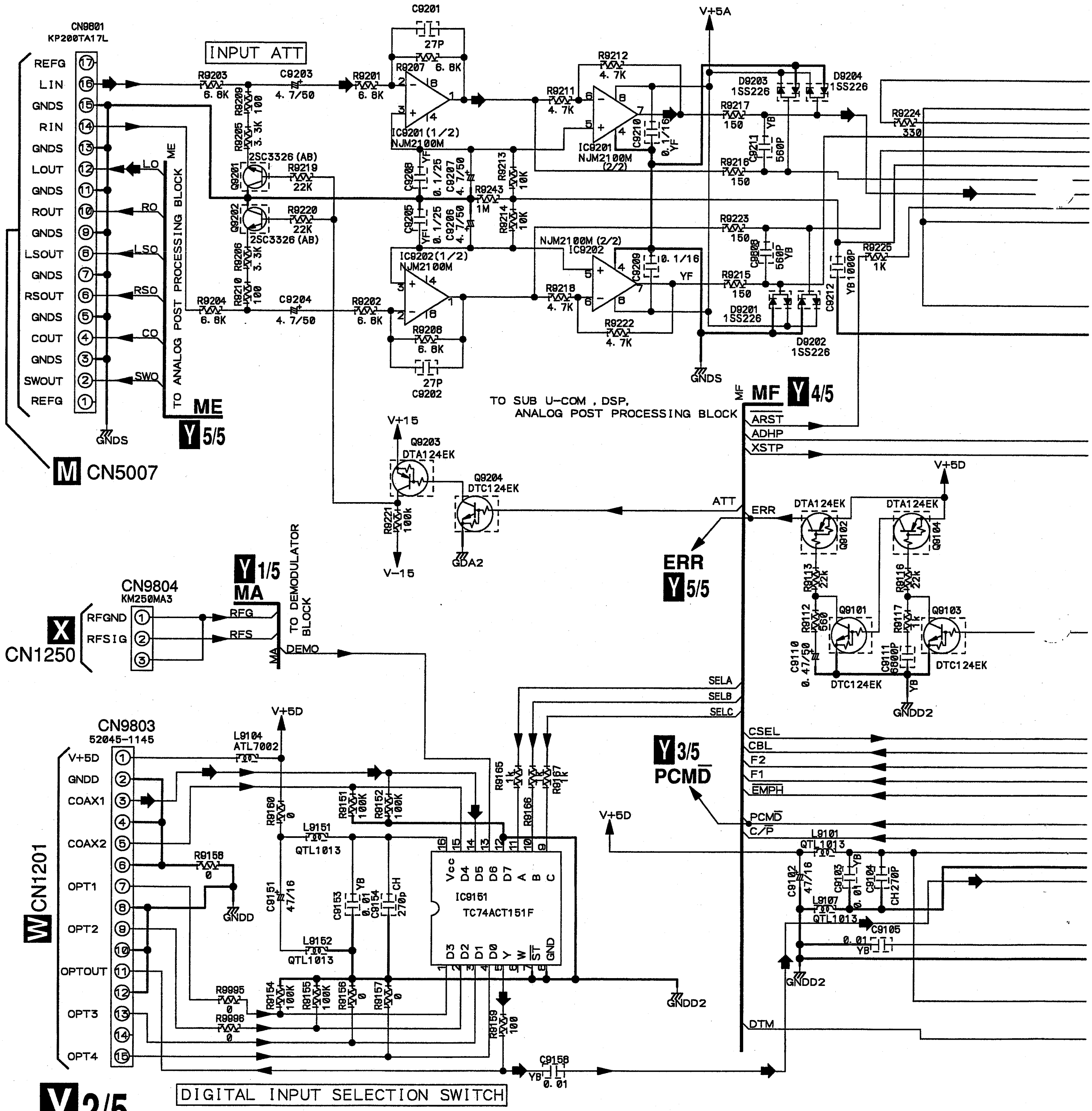
3.17 DSP ASSY (2/5)

A

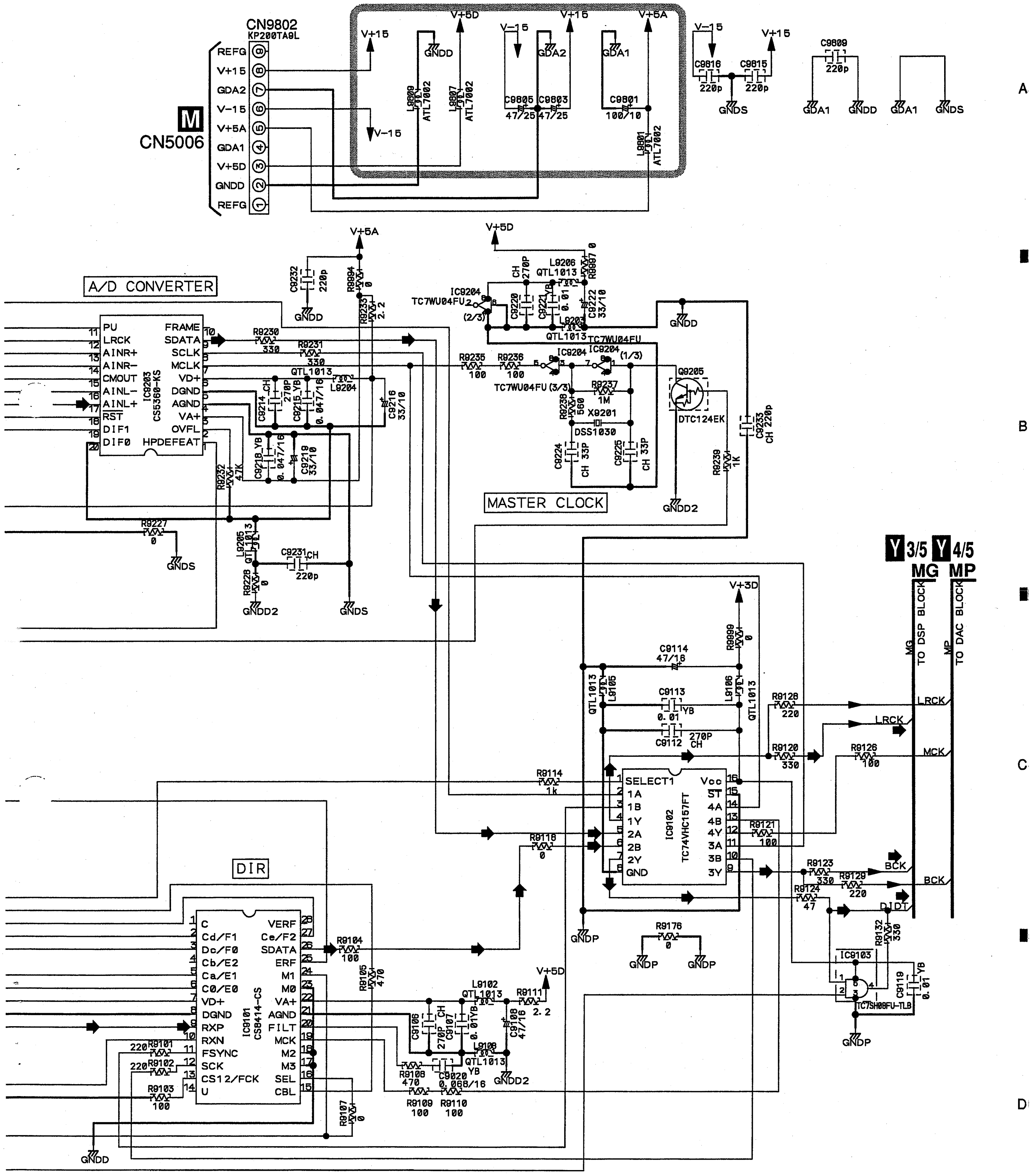
Y 2/5 DSP ASSY
(AWX7272)

: The power supply is shown with the marked box.

➡: AUDIO SIGNAL ROUTE

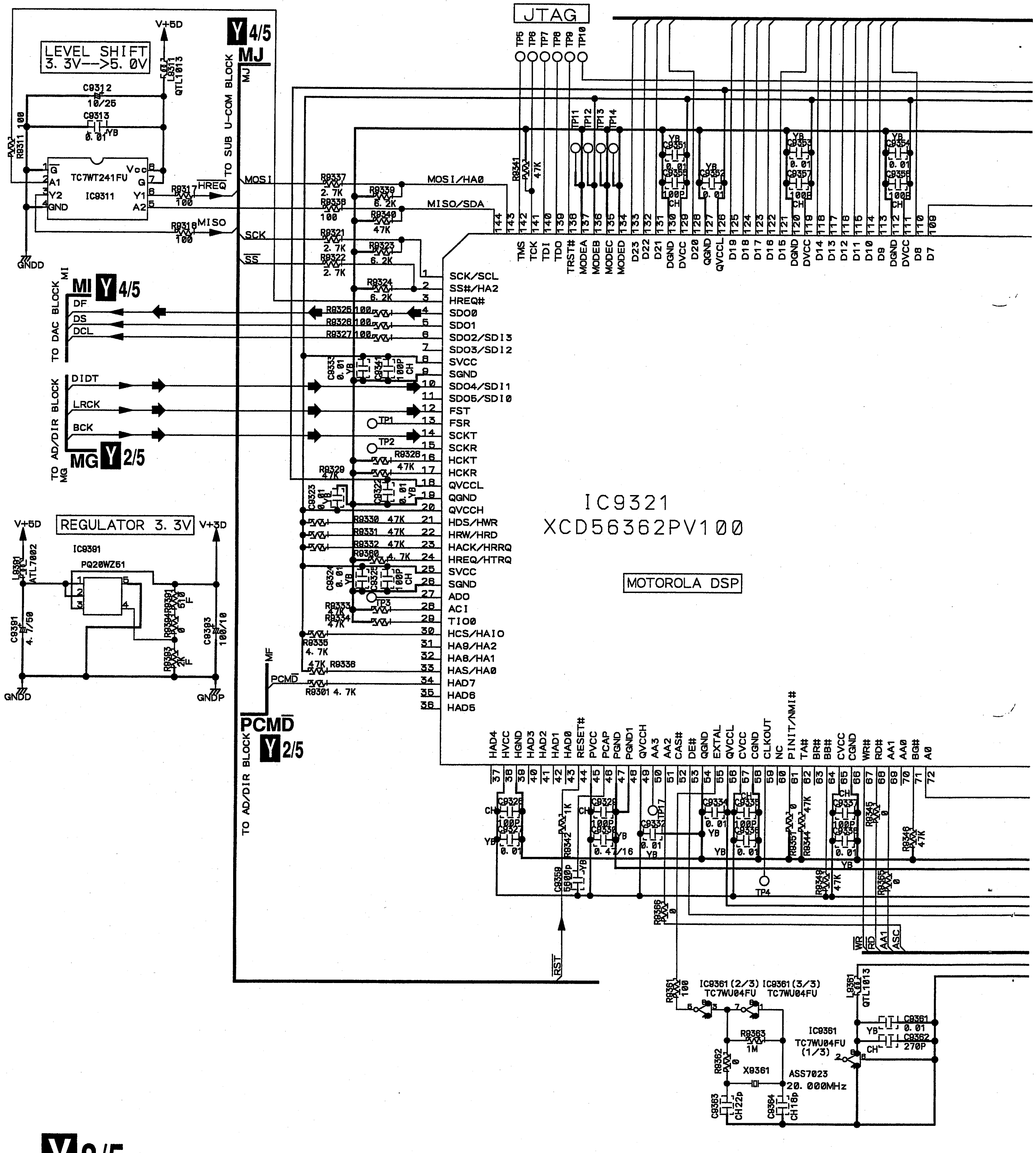

CN9801
KP200TA17L
REFG 17
LIN 16
GNDS 15
RIN 14
GNDS 13
LOUT 12
GNDS 11
ROUT 10
GNDS 9
LSOUT 8
GNDS 7
RSOUT 6
GNDS 5
COUT 4
GNDS 3
SWOUT 2
REFG 1
GNDS
M CN5007
INPUT ATT
R9203 6.8K
C9203 4.7/50
R9209 100
R9205 3.3K
Q9201
Q9202
2SC3326 (AB)
R9219 22K
R9220 22K
R9206 3.3K
R9210 100
R9204 6.8K
C9204 4.7/50
LO
RO
LSO
RSO
CO
SWO
ME
TO ANALOG POST PROCESSING BLOCK
ME
Y 5/5
C9201 27P
R9207 6.8K
R9201 6.8K
IC9201(1/2) NJM2100M
C9208 0.1/25
C9207 4.7/50
R9243 1M
R9213 10K
R9214 10K
C9205 0.1/25
C9206 4.7/50
YF
IC9202(1/2) NJM2100M
R9202 6.8K
R9208 6.8K
C9202 27P
R9212 4.7K
R9211 4.7K
IC9201 NJM2100M (2/2)
C9210 0.1/16
NJM2100M (2/2) IC9202
C9209 0.1/16
R9218 4.7K
R9222 4.7K
V+5A
D9203 1SS226
D9204 1SS226
R9217 150
C9211 560P
YB
R9216 150
R9223 150
C9808 560P
R9215 150
D9201 1SS226
D9202 1SS226
C9212 YB 1000P
R9224 330
R9225 1K
GNDS
MF
MF Y 4/5
TO SUB U-COM, DSP, ANALOG POST PROCESSING BLOCK
ARST
ADHP
XSTP
ATT
ERR
ERR
Y 5/5
V+15
Q9203 DTA124EK
Q9204 DTC124EK
R9221 100k
V-15
GDA2
V+5D
DTA124EK
DTA124EK
Q9102
Q9104
R9113 22K
R9116 22K
R9112 560
R9117 1k
Q9101
Q9103
C9110 0.47/50
C9111 6800P
YB
DTC124EK
DTC124EK
GNDD2
X CN1250
CN9804
KM250MA3
RFGND 1
RFSIG 2
3
Y 1/5
MA
RFG
RFS
DEMO
MA
TO DEMODULATOR BLOCK
W CN1201
CN9803
52045-1145
V+5D 1
GNDD 2
COAX1 3
4
COAX2 5
6
OPT1 7
8
OPT2 9
10
OPTOUT 11
12
OPT3 13
14
OPT4 15
V+5D
L9104 ATL7002
R9160 0
R9158 0
GNDD
L9151 QTL1013
C9151 47/16
C9153 0.01 YB
C9154 270p CH
L9152 QTL1013
R9151 100K
R9152 100K
R9995 0
R9996 0
R9154 100K
R9155 100K
R9156 0
R9157 0
IC9151 TC74ACT151F
Vcc D4 D5 D6 D7 A B C
D3 D2 D1 D0 Y W ST GND
R9165 1k
R9166 1k
R9167 1k
R9159 100
SELA
SELB
SELC
GNDD2
C9158 YB 0.01
Y 3/5
PCMD
CSEL
CBL
F2
F1
EMPH
PCMD
C/P
V+5D
L9101 QTL1013
C9102 47/16
C9103 0.01 YB
C9104 CH 270P
L9107 QTL1013
C9105 0.01 YB
GNDD2
DTM
DIGITAL INPUT SELECTION SWITCH

B C D

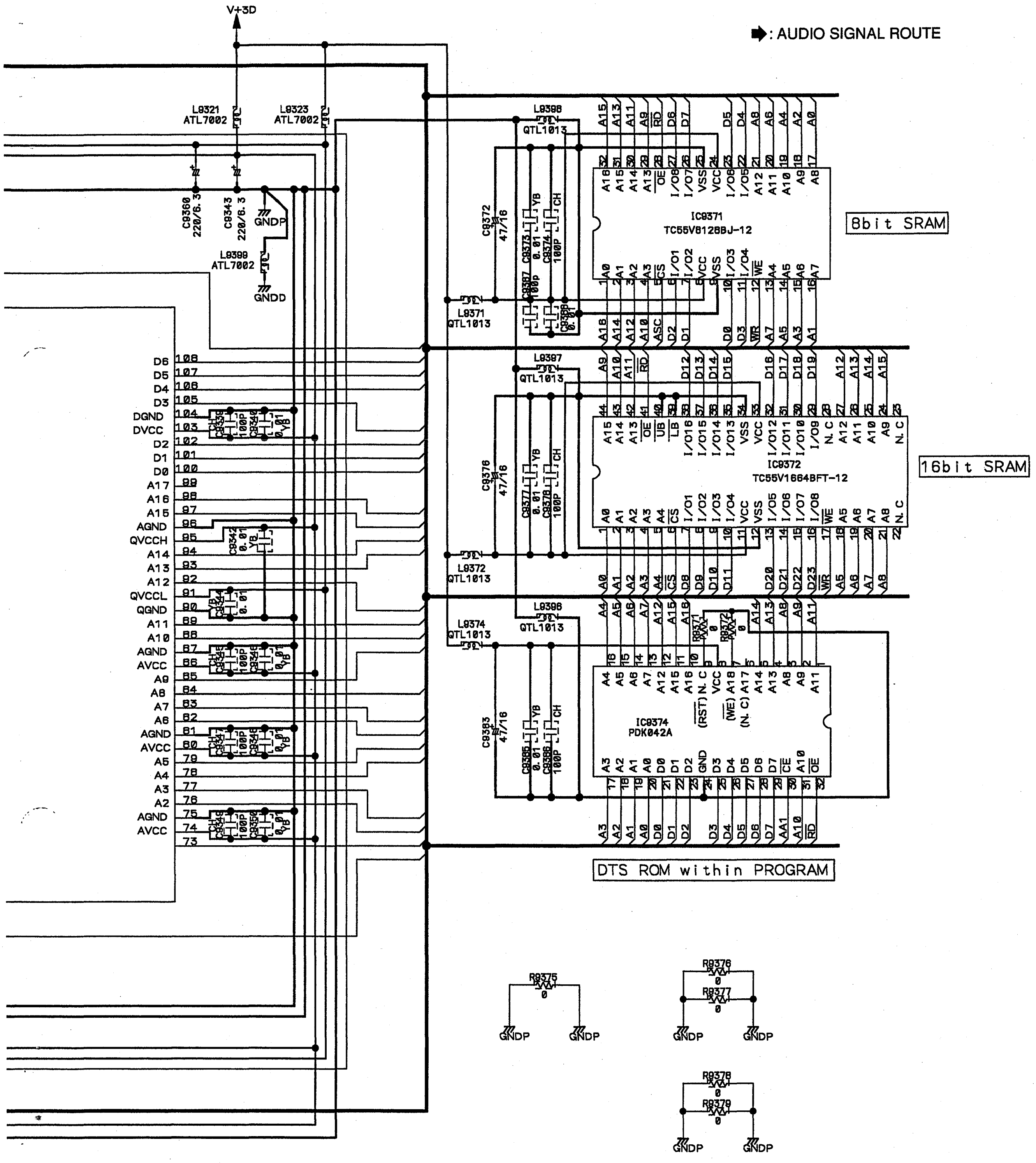

A
B
C
D
CN9802
KP200TA9L
M
CN5006
REFG
V+15
GDA2
V−15
V+5A
GDA1
V+5D
GNDD
REFG
V+5D
V+15
V+5A
V−15
GNDD
GDA2
GDA1
L9809
ATL7002
L9807
ATL7002
C9805
47/25
C9803
47/25
C9801
100/10
L9801
ATL7002
C9816
220p
C9815
220p
GNDS
C9809
220p
GDA1
GNDD
GDS
A/D CONVERTER
IC9203
CS5360-KS
PU
LRCK
AINR+
AINR−
CMOUT
AINL−
AINL+
RST
DIF1
DIF0
FRAME
SDATA
SCLK
MCLK
VD+
DGND
AGND
VA+
OVFL
HPDEFEAT
R9230
330
R9231
330
QTL1013
L9204
C8214 CH
270P
C9215 YB
0.047/16
C9216
33/10
C9218 YB
0.047/16
C9219
33/10
R9232
47K
R9227
0
L9205
QTL1013
C9231 CH
220p
R9228
0
GNDD2
GNDS
V+5A
C9232
220p
R9994
0
R9233
2.2
V+5D
IC9204
TC7WU04FU
(2/3)
C9220 CH
270P
C9221 YB
0.01
L9206
QTL1013
R9997 0
C9222
33/10
L9203
QTL1013
TC7WU04FU
R9235
100
R9236
100
IC9204
(1/3)
TC7WU04FU (3/3)
R9237
1M
R9238
560
X9201
DSS1030
C9224
CH 33P
C9225
CH 33P
Q9205
DTC124EK
C9233
CH 220p
R9239
1K
GNDD2
MASTER CLOCK
Y 3/5 Y 4/5
MG
MP
TO DSP BLOCK
TO DAC BLOCK
V+3D
R9999
0
C9114
47/16
L9105
QTL1013
L9106
QTL1013
C9113
0.01 YB
C9112
270P CH
R9128
220
LRCK
LRCK
R9120
330
R9126
100
MCK
R9114
1k
IC9102
TC74VHC157FT
SELECT1
1A
1B
1Y
2A
2B
2Y
GND
Vcc
ST
4A
4B
4Y
3A
3B
3Y
R9118
0
R9121
100
R9123
330
R9129
220
BCK
BCK
R9124
47
DIDT
R9132
330
IC9103
TC7SH08FU-TLB
C9119
0.01 YB
GNDP
R9176
0
GNDP
GNDP
DIR
IC9101
CS8414-CS
C
Cd/F1
Dc/F0
Cb/E2
Ca/E1
C0/E0
VD+
DGND
RXP
RXN
FSYNC
SCK
CS12/FCK
U
VERF
Ce/F2
SDATA
ERF
M1
M0
VA+
AGND
FILT
MCK
M2
M3
SEL
CBL
R9104
100
R9105
470
R9101
220
R9102
220
R9103
100
L9102
QTL1013
R9111
2.2
V+5D
C9106
270P CH
C9107
0.01 YB
C9108
47/16
L9108
QTL1013
C9020
0.068/16 YB
R9108
470
R9109
100
R9110
100
R9107
0
GNDD
GNDD2

3.18 DSP ASSY (3/5)

Y 3/5 DSP ASSY
(AWX7272)

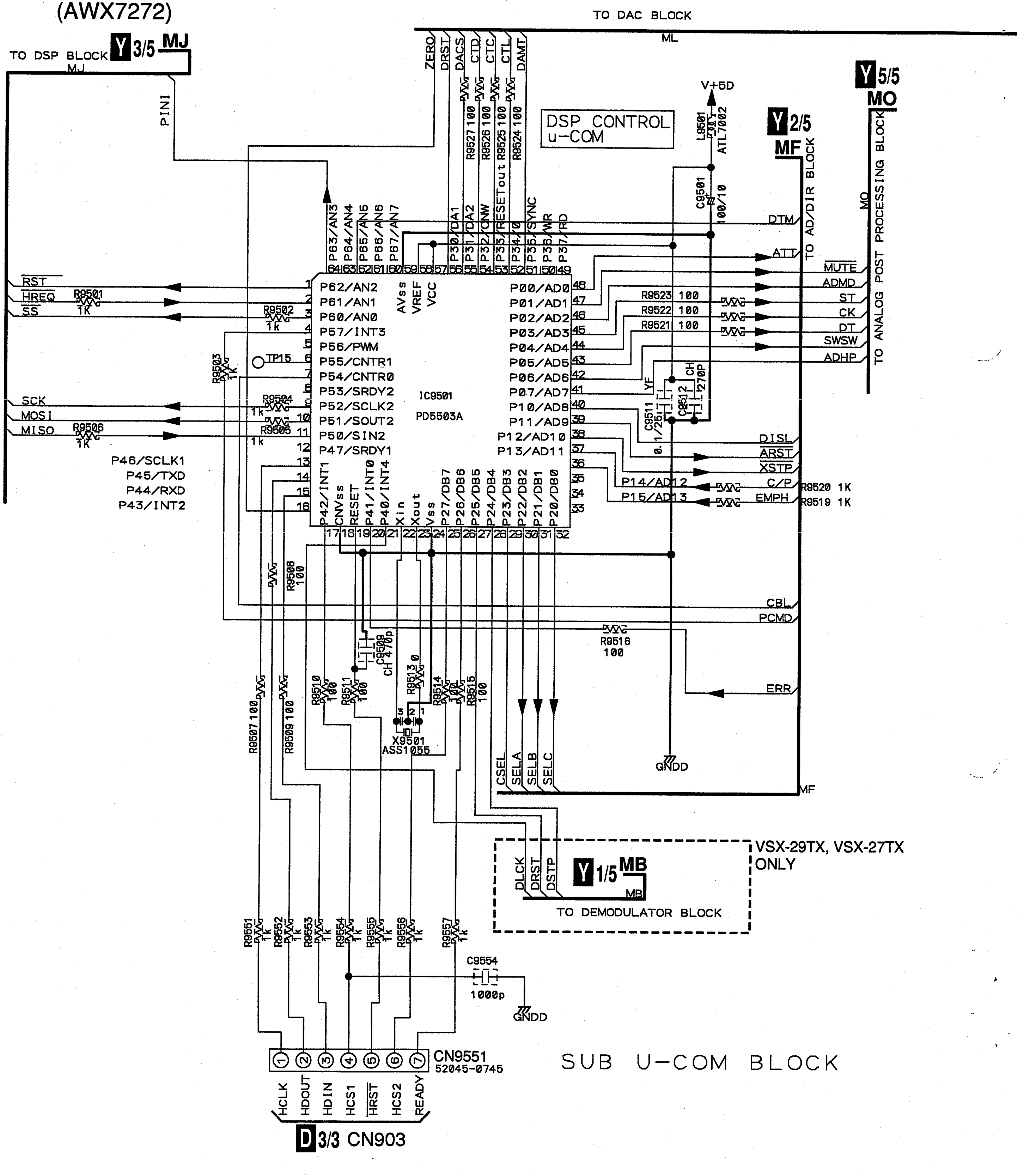


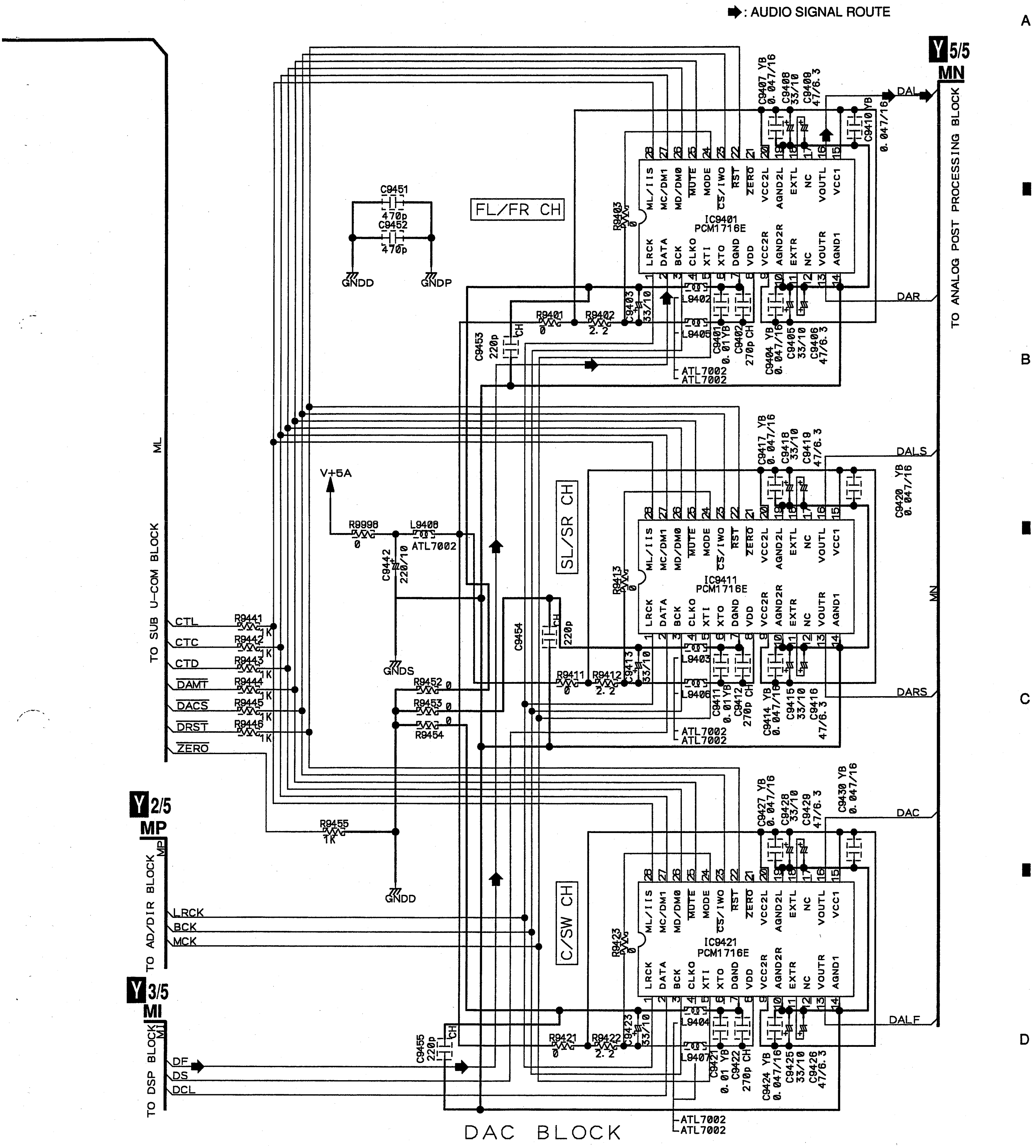
LEVEL SHIFT
3.3V-->5.0V
V+5D
L9311
QTL1013
C9312
10/25
C9313
0.01 YB
R9311 100
TC7WT241FU
IC9311
G
A1
Y2
GND
Vcc
G
Y1
A2
R9317 100
R9318 100
HREQ
MISO
GNDD
Y 4/5
MJ
TO SUB U-COM BLOCK
MOSI
SCK
SS
R9337 2.7K
R9338 100
R9339 6.2K
R9340 47K
MOSI/HA0
MISO/SDA
R9321 2.7K
R9322 2.7K
R9323 6.2K
R9324 6.2K
MI Y 4/5
TO DAC BLOCK
DF
DS
DCL
R9325 100
R9326 100
R9327 100
TO AD/DIR BLOCK
DIDT
LRCK
BCK
MG Y 2/5
TP1
TP2
R9328 47K
R9329 47K
C9333 0.01 YB
C9341 100P CH
C9323 0.01 YB
C9322 0.01 YB
R9330 47K
R9331 47K
R9332 47K
R9360 4.7K
C9324 0.01 YB
C9325 100P CH
TP3
R9333 4.7K
R9334 47K
R9335 4.7K
R9336 47K
MF
PCMD
R9301 4.7K
PCMD
Y 2/5
TO AD/DIR BLOCK
1 SCK/SCL
2 SS#/HA2
3 HREQ#
4 SDO0
5 SDO1
6 SDO2/SDI3
7 SDO3/SDI2
8 SVCC
9 SGND
10 SDO4/SDI1
11 SDO5/SDI0
12 FST
13 FSR
14 SCKT
15 SCKR
16 HCKT
17 HCKR
18 QVCCL
19 QGND
20 QVCCH
21 HDS/HWR
22 HRW/HRD
23 HACK/HRRQ
24 HREQ/HTRQ
25 SVCC
26 SGND
27 ADO
28 ACI
29 TIO0
30 HCS/HA10
31 HA9/HA2
32 HA8/HA1
33 HAS/HA0
34 HAD7
35 HAD6
36 HAD5
IC9321
XCD56362PV100
MOTOROLA DSP
JTAG
TP5 TP6 TP7 TP8 TP9 TP10
TP11 TP12 TP13 TP14
R9341 47K
C9351 0.01 YB
C9355 100P CH
C9352 0.01 YB
C9353 0.01 YB
C9357 100P CH
C9354 0.01 YB
C9358 100P CH
144 143 142 TMS 141 TCK 140 TDI 139 TDO 138 TRST# 137 MODEA 136 MODEB 135 MODEC 134 MODED 133 D23 132 D22 131 D21 130 DGND 129 DVCC 128 D20 127 QGND 126 QVCCL 125 D19 124 D18 123 D17 122 D16 121 D15 120 DGND 119 DVCC 118 D14 117 D13 116 D12 115 D11 114 D10 113 D9 112 DGND 111 DVCC 110 D8 109 D7
37 HAD4 38 HVCC 39 HGND 40 HAD3 41 HAD2 42 HAD1 43 HAD0 44 RESET# 45 PVCC 46 PCAP 47 PGND 48 PGND1 49 QVCCH 50 AA3 51 AA2 52 CAS# 53 DE# 54 QGND 55 EXTAL 56 QVCCL 57 CVCC 58 CGND 59 CLKOUT 60 NC 61 PINIT/NMI# 62 TA# 63 BR# 64 BB# 65 CVCC 66 CGND 67 WR# 68 RD# 69 AA1 70 AA0 71 BG# 72 A0
C9326 100P CH
C9327 0.01 YB
R9342 1K
C9350 5600P YB
C9328 100P CH
C9329 0.47/16
C9332 0.01 YB
TP17
C9334 0.01 YB
C9335 100P CH
C9336 0.01
R9343 0
R9344 47K
C9337 100P CH
C9338 0.01 YB
R9345 0
R9346 47K
R9349 47K
R9365 0
TP4
R9366 0
RST
WR
RD
AA1
ASC
REGULATOR 3.3V
V+5D
V+3D
IC9391
PQ20WZ51
L9391
ATL7002
C9391 4.7/50
R9394 510
R9391 0
R9393 2K
C9393 100/10
GNDD
GNDP
R9361 100
IC9361 (2/3) TC7WU04FU
IC9361 (3/3) TC7WU04FU
R9363 1M
R9362 0
X9361
ASS7023
20.000MHz
C9363 CH22p
C9364 CH16p
IC9361 TC7WU04FU (1/3)
L9361 QTL1013
C9361 0.01 YB
C9362 270P CH


V+3D
➡: AUDIO SIGNAL ROUTE
L9321 ATL7002
L9323 ATL7002
C9360 220/6.3
C9343 220/6.3
GNDP
L9399 ATL7002
GNDD
L9398 QTL1013
L9371 QTL1013
C9372 47/16
C9373 0.01 YB
C9374 100P CH
C9387 100p
C9388 0.01
IC9371 TC55V8128BJ-12
8bit SRAM
L9397 QTL1013
L9372 QTL1013
C9376 47/16
C9377 0.01 YB
C9378 100P CH
IC9372 TC55V1664BFT-12
16bit SRAM
L9374 QTL1013
L9396 QTL1013
C9383 47/16
C9385 0.01 YB
C9386 100P CH
R9371 0
R9372 0
IC9374 PDK042A
DTS ROM within PROGRAM
D6 108
D5 107
D4 106
D3 105
DGND 104
DVCC 103
D2 102
D1 101
D0 100
A17 99
A16 98
A15 97
AGND 96
QVCCH 95
A14 94
A13 93
A12 92
QVCCL 91
QGND 90
A11 89
A10 88
AGND 87
AVCC 86
A9 85
A8 84
A7 83
A6 82
AGND 81
AVCC 80
A5 79
A4 78
A3 77
A2 76
AGND 75
AVCC 74
73
C9339 CH 100P
C9340 0.01 YB
C9342 0.01 YB
C9344 0.01 YB
C9345 CH 100P
C9346 0.01 YB
C9347 CH 100P
C9348 0.01 YB
C9349 CH 100P
C9350 0.01 YB
R9375 0
R9376 0
R9377 0
R9378 0
R9379 0
GNDP

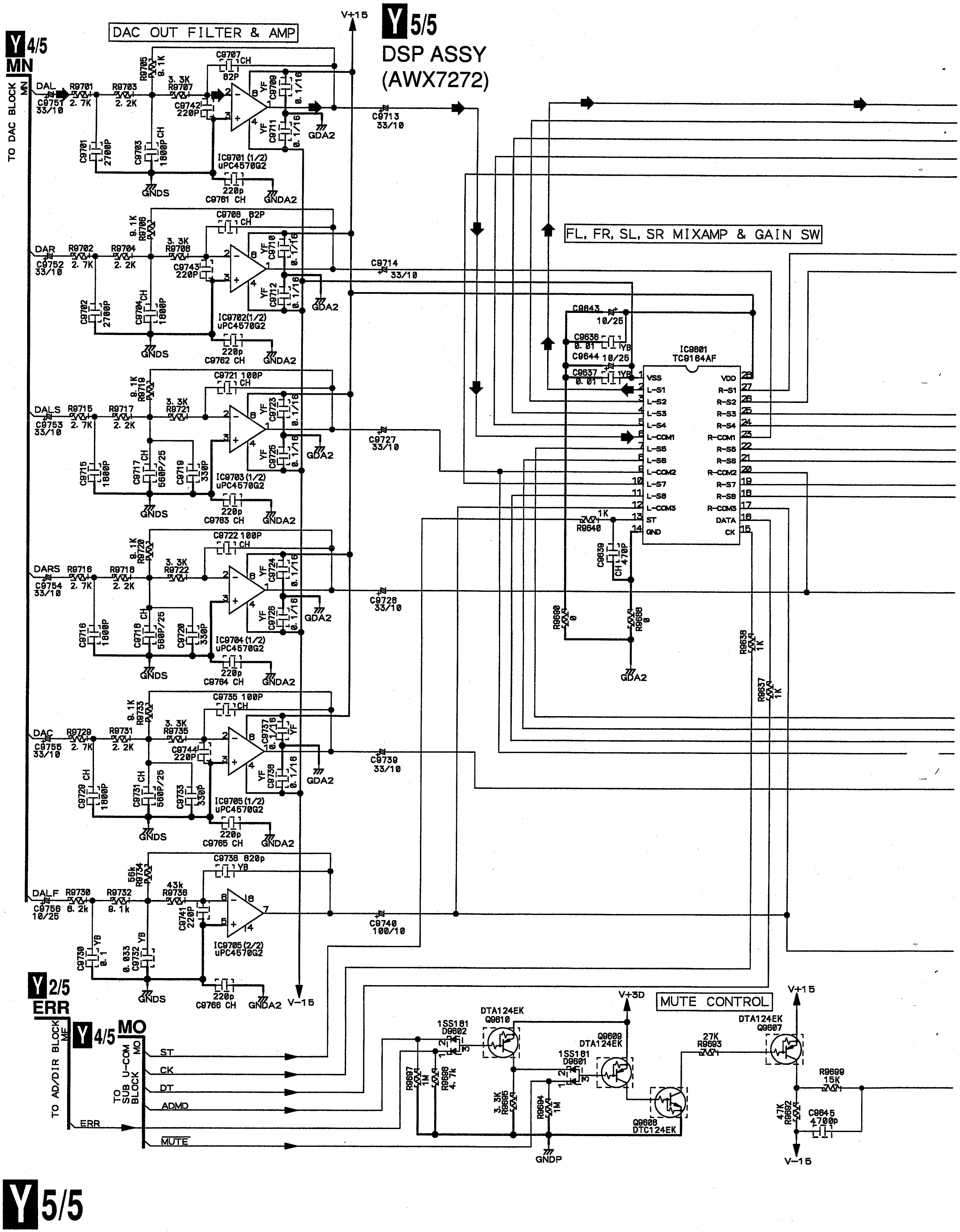
3.19 DSP ASSY (4/5)

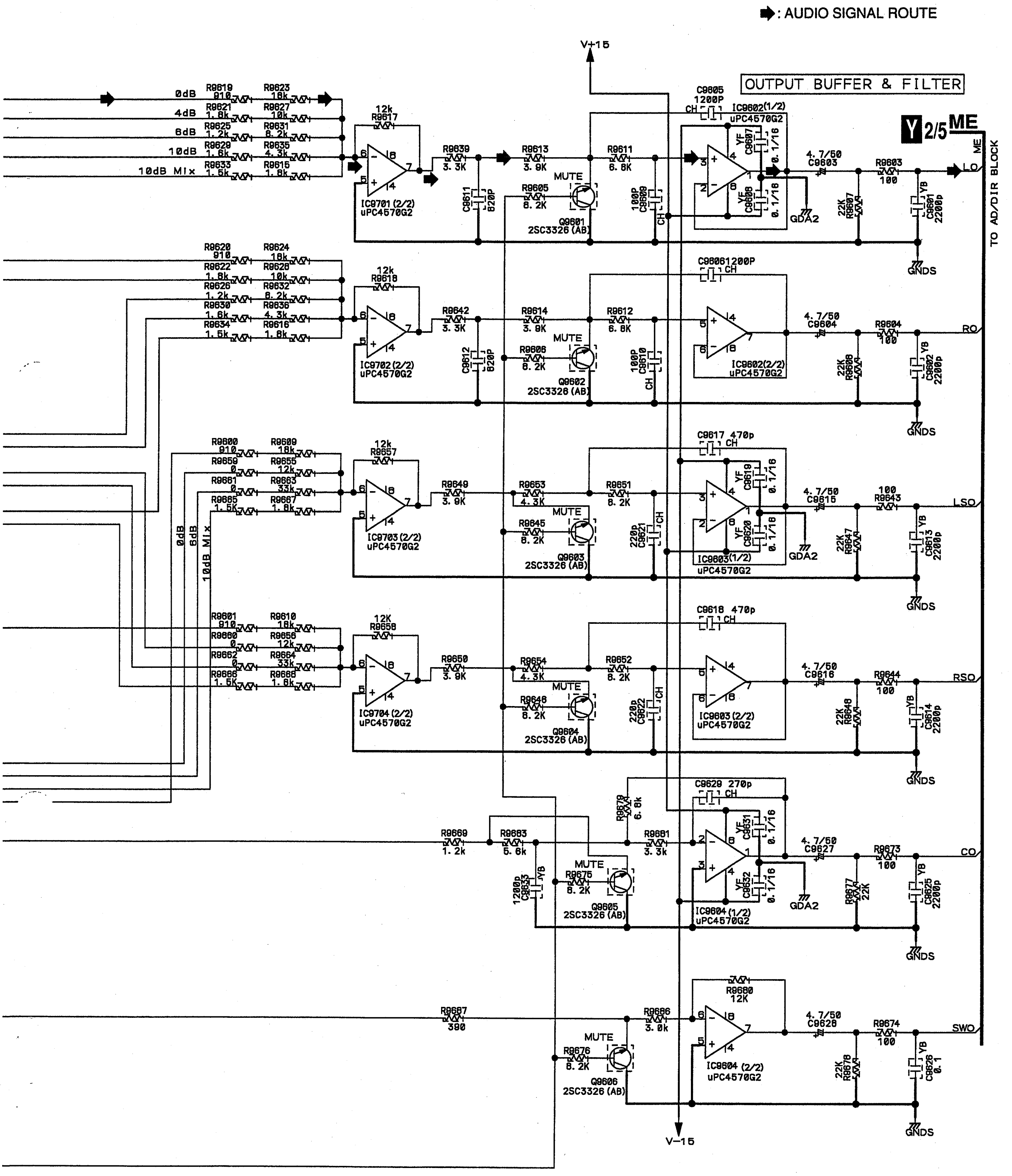
Y 4/5 DSP ASSY
(AWX7272)


TO DAC BLOCK
ML
TO DSP BLOCK
Y 3/5 MJ
MJ
PINI
ZERO
DRST
DACS
CTD
CTC
CTL
DAMT
R9527 100
R9526 100
R9525 100
R9524 100
DSP CONTROL u-COM
V+5D
L9501
ATL7002
C9501
100/10
Y 2/5
MF
TO AD/DIR BLOCK
Y 5/5
MO
TO ANALOG POST PROCESSING BLOCK
MO
DTM
ATT
MUTE
ADMD
ST
CK
DT
SWSW
ADHP
R9523 100
R9522 100
R9521 100
RST
HREQ
SS
R9501 1K
R9502 1k
R9503 1K
TP15
SCK
MOSI
MISO
R9504 1k
R9505 1k
R9506 1K
P46/SCLK1
P45/TXD
P44/RXD
P43/INT2
IC9501
PD5503A
P63/AN3
P64/AN4
P65/AN5
P66/AN6
P67/AN7
P30/DA1
P31/DA2
P32/CNW
P33/RESET
P34/0
P35/SYNC
P36/WR
P37/RD
AVss
VREF
VCC
P62/AN2
P61/AN1
P60/AN0
P57/INT3
P56/PWM
P55/CNTR1
P54/CNTR0
P53/SRDY2
P52/SCLK2
P51/SOUT2
P50/SIN2
P47/SRDY1
P00/AD0
P01/AD1
P02/AD2
P03/AD3
P04/AD4
P05/AD5
P06/AD6
P07/AD7
P10/AD8
P11/AD9
P12/AD10
P13/AD11
P14/AD12
P15/AD13
P42/INT1
CNVss
RESET
P41/INT0
P40/INT4
Xin
Xout
Vss
P27/DB7
P26/DB6
P25/DB5
P24/DB4
P23/DB3
P22/DB2
P21/DB1
P20/DB0
C9511 0.1/25
C9512 CH 270P
YF
DISL
ARST
XSTP
C/P
EMPH
R9520 1K
R9519 1K
CBL
PCMD
R9516 100
ERR
R9508 100
R9507 100
R9509 100
C9509 CH 470p
R9510 100
R9511 100
R9513 0
R9514 100
R9515 100
X9501
ASS1055
GNDD
CSEL
SELA
SELB
SELC
MF
DLCK
DRST
DSTP
Y 1/5 MB
MB
TO DEMODULATOR BLOCK
VSX-29TX, VSX-27TX ONLY
R9551 1k
R9552 1k
R9553 1k
R9554 1k
R9555 1k
R9556 1k
R9557 1k
C9554
1000p
GNDD
CN9551
52045-0745
HCLK
HDOUT
HDIN
HCS1
HRST
HCS2
READY
D 3/3 CN903
SUB U-COM BLOCK


: AUDIO SIGNAL ROUTE
A
B
C
D
Y 5/5
MN
DAL
DAR
DALS
DARS
DAC
DALF
TO ANALOG POST PROCESSING BLOCK
MN
FL/FR CH
SL/SR CH
C/SW CH
IC9401
PCM1716E
IC9411
PCM1716E
IC9421
PCM1716E
ML/IIS
MC/DM1
MD/DM0
MUTE
MODE
CS/IWO
RST
ZERO
VCC2L
AGND2L
EXTL
NC
VOUTL
VCC1
LRCK
DATA
BCK
CLKO
XTI
XTO
DGND
VDD
VCC2R
AGND2R
EXTR
NC
VOUTR
AGND1
C9451
470p
C9452
470p
GNDD
GNDP
C9407 YB
0.047/16
C9408
33/10
C9409
47/6.3
C9410 YB
0.047/16
R9403
0
C9403
33/10
R9401
0
R9402
2.2
C9453
220p
CH
L9402
L9405
C9401
0.01 YB
C9402
270p CH
C9404 YB
0.047/16
C9405
33/10
C9406
47/6.3
ATL7002
ATL7002
C9417 YB
0.047/16
C9418
33/10
C9419
47/6.3
C9420 YB
0.047/16
V+5A
R9998
0
L9408
ATL7002
C9442
220/10
R9413
0
C9454
220p
CH
C9413
33/10
R9411
0
R9412
2.2
L9403
L9406
C9411
0.01 YB
C9412
270p CH
C9414 YB
0.047/16
C9415
33/10
C9416
47/6.3
ATL7002
ATL7002
GNDS
R9452 0
R9453 0
R9454 0
ML
TO SUB U-COM BLOCK
CTL
CTC
CTD
DAMT
DACS
DRST
ZERO
R9441
1K
R9442
1K
R9443
1K
R9444
1K
R9445
1K
R9446
1K
Y 2/5
MP
TO AD/DIR BLOCK
MP
LRCK
BCK
MCK
R9455
1K
GNDD
C9427 YB
0.047/16
C9428
33/10
C9429
47/6.3
C9430 YB
0.047/16
R9423
0
C9423
33/10
R9421
0
R9422
2.2
L9404
L9407
C9421
0.01 YB
C9422
270p CH
C9424 YB
0.047/16
C9425
33/10
C9426
47/6.3
ATL7002
ATL7002
Y 3/5
MI
TO DSP BLOCK
MI
DF
DS
DCL
C9455
220p
CH
DAC BLOCK

3.20 DSP ASSY (5/5)

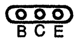
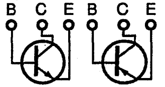
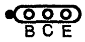
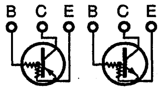
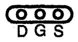
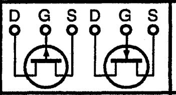
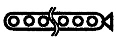
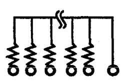
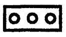
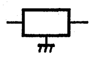

Y 5/5
DSP ASSY
(AWX7272)
DAC OUT FILTER & AMP
FL, FR, SL, SR MIXAMP & GAIN SW
MUTE CONTROL
Y 4/5 MN
TO DAC BLOCK
DAL
DAR
DALS
DARS
DAC
DALF
V+15
V-15
V+3D
GNDS
GNDA2
GDA2
GNDP
IC9701 (1/2) uPC4570G2
IC9702(1/2) uPC4570G2
IC9703 (1/2) uPC4570G2
IC9704 (1/2) uPC4570G2
IC9705 (1/2) uPC4570G2
IC9705 (2/2) uPC4570G2
IC9601 TC9164AF
VSS
L-S1
L-S2
L-S3
L-S4
L-COM1
L-S5
L-S6
L-COM2
L-S7
L-S8
L-COM3
ST
GND
VDD
R-S1
R-S2
R-S3
R-S4
R-COM1
R-S5
R-S6
R-COM2
R-S7
R-S8
R-COM3
DATA
CK
C9751 33/10
C9752 33/10
C9753 33/10
C9754 33/10
C9755 33/10
C9756 10/25
C9713 33/10
C9714 33/10
C9727 33/10
C9728 33/10
C9739 33/10
C9740 100/10
R9701 2.7K
R9703 2.2K
R9705 9.1K
R9707 3.3K
C9707 82P CH
C9742 220P
C9701 2700P
C9703 1800P CH
C9709 YF 0.1/16
C9711 YF 0.1/16
C9761 220p CH
R9702 2.7K
R9704 2.2K
R9706 9.1K
R9708 3.3K
C9708 82P CH
C9743 220P
C9702 2700P
C9704 1800P CH
C9710 YF 0.1/16
C9712 YF 0.1/16
C9762 220p CH
R9715 2.7K
R9717 2.2K
R9719 9.1K
R9721 3.3K
C9721 100P CH
C9715 1800P
C9717 560P/25 CH
C9719 330P
C9723 YF 0.1/16
C9725 YF 0.1/16
C9763 220p CH
R9716 2.7K
R9718 2.2K
R9720 9.1K
R9722 3.3K
C9722 100P CH
C9716 1800P
C9718 560P/25 CH
C9720 330P
C9724 YF 0.1/16
C9726 YF 0.1/16
C9764 220p CH
R9729 2.7K
R9731 2.2K
R9733 9.1K
R9735 3.3K
C9735 100P CH
C9744 220P
C9729 1800P CH
C9731 560P/25 CH
C9733 330P
C9737 YF 0.1/16
C9738 YF 0.1/16
C9765 220p CH
R9730 6.2k
R9732 9.1k
R9734 56k
R9736 43k
C9736 820p YB
C9741 220P
C9730 0.1 YB
C9732 0.033 YB
C9766 220p CH
C9643 10/25
C9636 0.01 YB
C9644 10/25
C9637 0.01 YB
R9640 1K
C9639 470P CH
R9600 0
R9668 0
R9638 1K
R9637 1K
Y 2/5 ERR
TO AD/DIR BLOCK
ME
Y 4/5 MO
TO SUB U-COM BLOCK
ST
CK
DT
ADMD
ERR
MUTE
1SS181 D9602
DTA124EK Q9610
R9697 1M
R9698 4.7k
R9695 3.3K
1SS181 D9601
DTA124EK Q9609
R9694 1M
Q9608 DTC124EK
27K R9693
DTA124EK Q9607
R9699 15K
R9692 47K
C9645 4700p
1
2
3
4
A
B
C
D


: AUDIO SIGNAL ROUTE
OUTPUT BUFFER & FILTER
Y 2/5 ME
TO AD/DIR BLOCK
V+15
V-15
0dB
4dB
6dB
10dB
10dB Mix
R9619 910
R9623 18k
R9621 1.8k
R9627 10k
R9625 1.2k
R9631 8.2k
R9629 1.6k
R9635 4.3k
R9633 1.5k
R9615 1.8k
12k R9617
IC9701 (2/2) uPC4570G2
R9639 3.3K
C9611 820P
R9613 3.9K
MUTE
R9605 8.2K
Q9601 2SC3326 (AB)
R9611 6.8K
100P C9609 CH
C9605 1200P CH
IC9602(1/2) uPC4570G2
YF C9607 0.1/16
YF C9608 0.1/16
GDA2
4.7/50 C9603
22K R9607
R9603 100
YB C9601 2200p
GNDS
LO
R9620 910
R9624 18k
R9622 1.8k
R9628 10k
R9626 1.2k
R9632 8.2k
R9630 1.6k
R9636 4.3k
R9634 1.5k
R9616 1.8k
12k R9618
IC9702 (2/2) uPC4570G2
R9642 3.3K
C9612 820P
R9614 3.9K
R9606 8.2K
Q9602 2SC3326 (AB)
R9612 6.8K
100P C9610 CH
C9606 1200P CH
IC9602(2/2) uPC4570G2
4.7/50 C9604
22K R9608
R9604 100
YB C9602 2200p
RO
R9600 910
R9609 18k
R9659 0
R9655 12k
R9661 0
R9663 33k
R9665 1.5k
R9667 1.8k
12k R9657
IC9703 (2/2) uPC4570G2
R9649 3.9K
R9653 4.3K
R9645 8.2K
Q9603 2SC3326 (AB)
R9651 8.2K
220p C9621 CH
C9617 470p CH
YF C9619 0.1/16
YF C9620 0.1/16
IC9603(1/2) uPC4570G2
4.7/50 C9615
100 R9643
22K R9647
YB C9613 2200p
LSO
0dB
6dB
10dB Mix
R9601 910
R9610 18k
R9660 0
R9656 12k
R9662 0
R9664 33k
R9666 1.5k
R9668 1.6k
12K R9658
IC9704 (2/2) uPC4570G2
R9650 3.9K
R9654 4.3K
R9648 8.2K
Q9604 2SC3326 (AB)
R9652 8.2K
220p C9622 CH
C9618 470p CH
IC9603 (2/2) uPC4570G2
4.7/50 C9616
R9644 100
22K R9648
YB C9614 2200p
RSO
R9669 1.2k
R9683 5.6k
1200p C9633 YB
R9675 8.2K
Q9605 2SC3326 (AB)
R9679 6.8k
R9681 3.3k
C9629 270p CH
YF C9631 0.1/16
YF C9632 0.1/16
IC9604 (1/2) uPC4570G2
4.7/50 C9627
R9677 22K
R9673 100
YB C9625 2200p
CO
R9687 390
R9676 8.2K
Q9606 2SC3326 (AB)
R9686 3.0k
R9680 12K
IC9604 (2/2) uPC4570G2
4.7/50 C9628
22K R9678
R9674 100
YB C9626 0.1
SWO
A
B
C
D

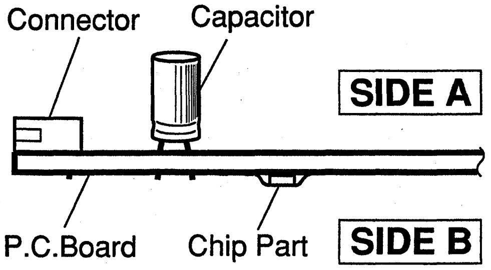
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

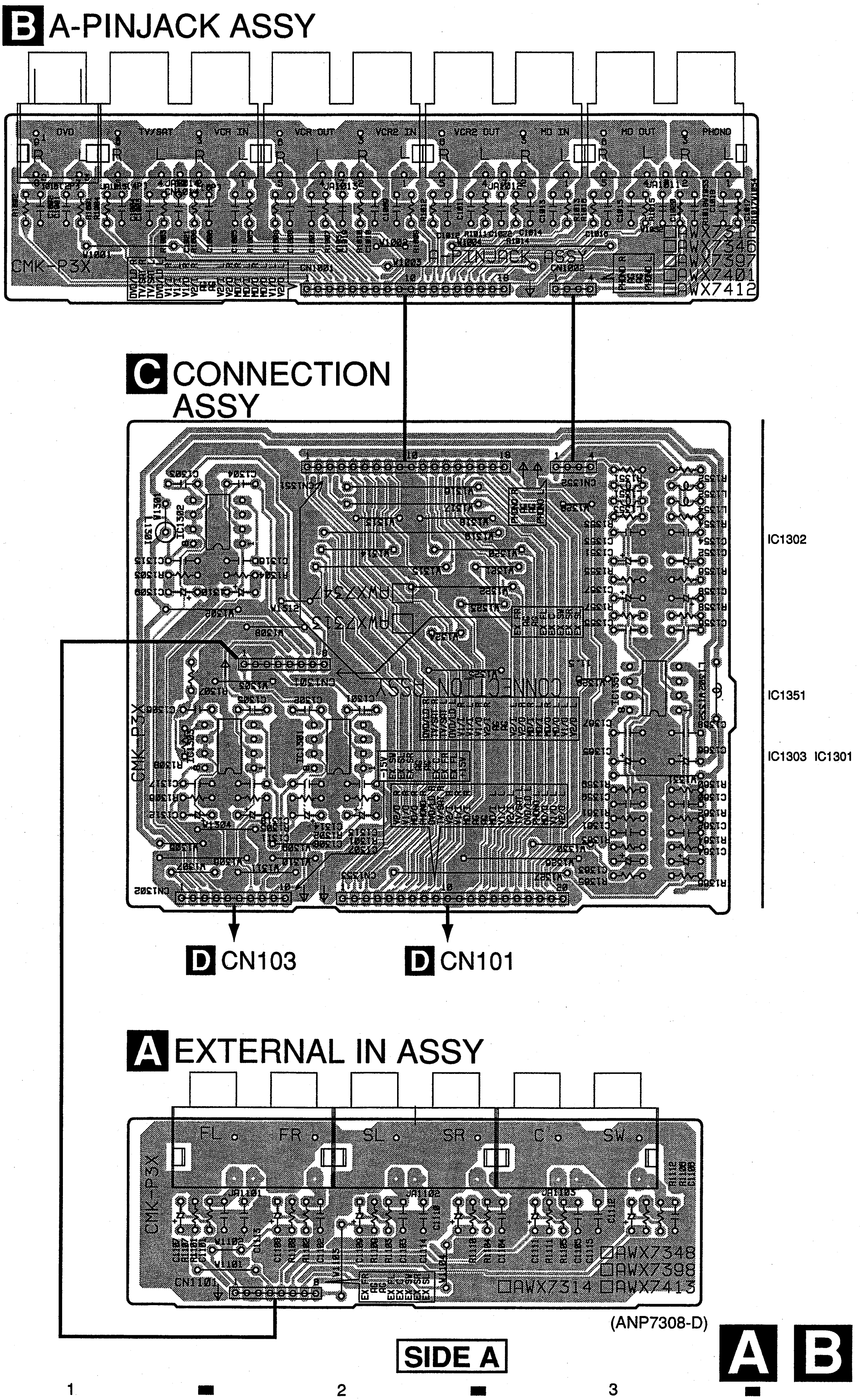
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

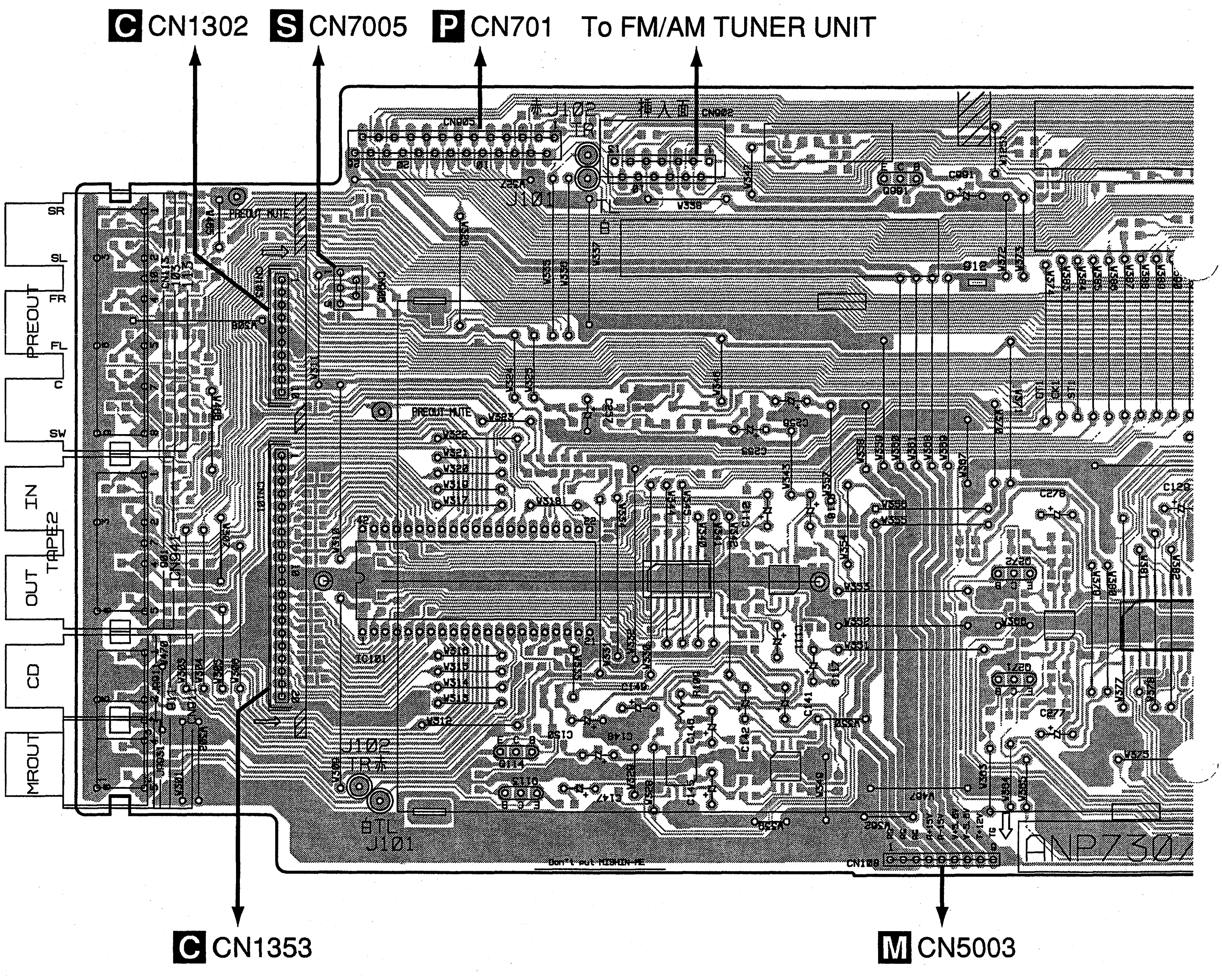
4.1 EXTERNAL IN, A-PINJACK and CONNECTION ASSYS


B A-PINJACK ASSY
DVD
TV/SAT
VCR IN
VCR OUT
VCR2 IN
VCR2 OUT
MD IN
MD OUT
PHONO
CMK-P3X
A-PINJACK ASSY
CN1001
CN1002
AWX7346
AWX7397
AWX7401
AWX7412
C CONNECTION ASSY
CONNECTION ASSY
CMK-P3X
CN1351
CN1352
CN1301
CN1302
IC1302
IC1351
IC1303 IC1301
D CN103
D CN101
A EXTERNAL IN ASSY
FL
FR
SL
SR
C
SW
CMK-P3X
JA1101
JA1102
JA1103
CN1101
AWX7348
AWX7398
AWX7314
AWX7413

(ANP7308-D)

SIDE A

4.2 MAIN CONTROL ASSY


C CN1302
S CN7005
P CN701
To FM/AM TUNER UNIT
C CN1353
M CN5003
SR
SL
FR
FL
C
SW
PREOUT
IN
OUT
TAPE2
CD
MROUT
PREOUT MUTE
IC101
J102
TR
J101
BTL
CN100
ANP730

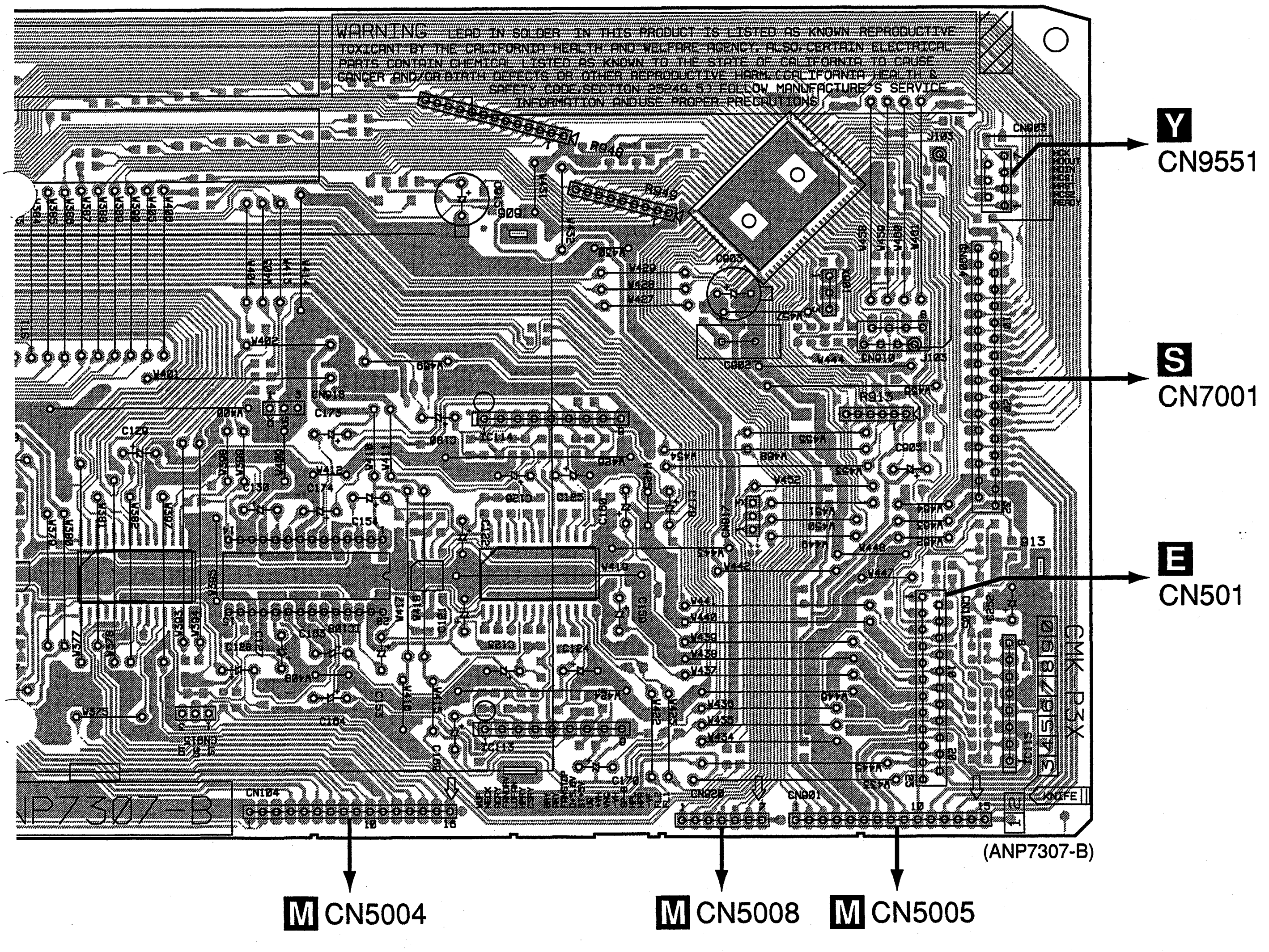
IC101
Q114
Q113

Q991

Q272
Q271

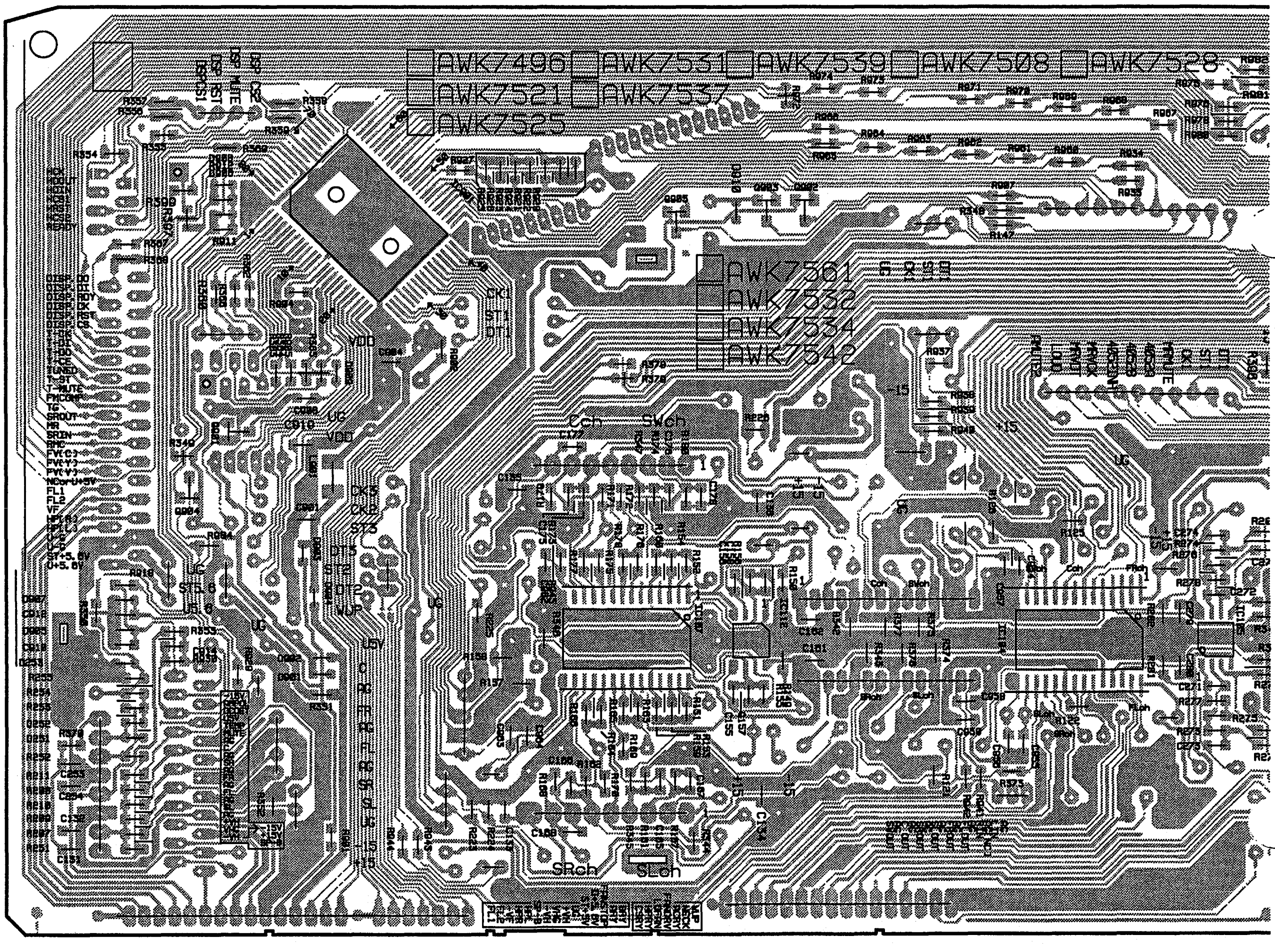
SIDE A

D MAIN CONTROL ASSY


WARNING LEAD IN SOLDER IN THIS PRODUCT IS LISTED AS KNOWN REPRODUCTIVE TOXICANT BY THE CALIFORNIA HEALTH AND WELFARE AGENCY. ALSO CERTAIN ELECTRICAL PARTS CONTAIN CHEMICAL LISTED AS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. (CALIFORNIA HEALTH & SAFETY CODE, SECTION 25249.5) FOLLOW MANUFACTURE'S SERVICE INFORMATION AND USE PROPER PRECAUTIONS
Y CN9551
S CN7001
E CN501
CMK P3X
ANP7307-B
CN104
CN920
CN901
IC113
IC114
(ANP7307-B)
M CN5004
M CN5008
M CN5005

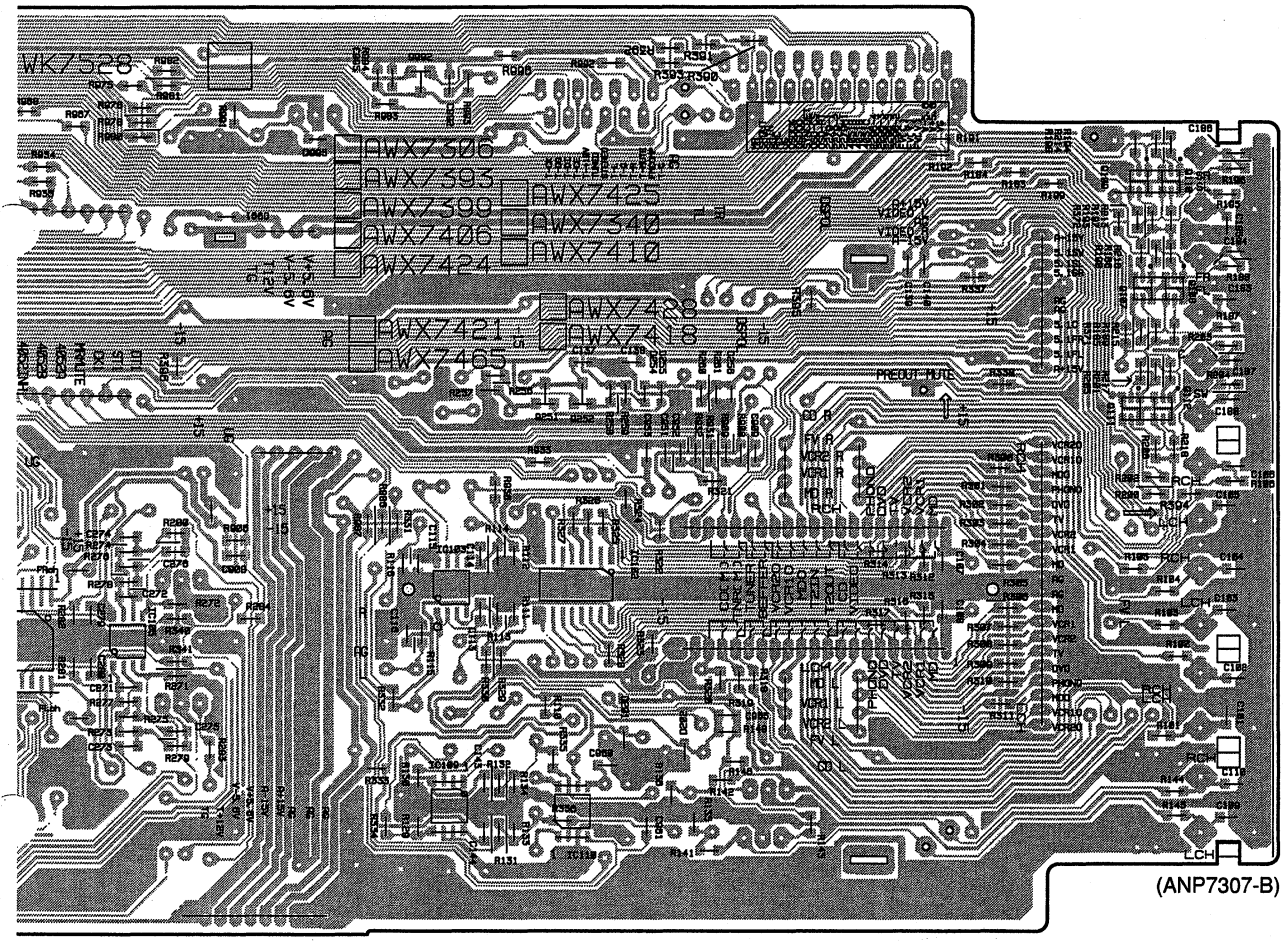
IC108 IC114 IC113 IC115

D MAIN CONTROL ASSY


AWK7496
AWK7531
AWK7539
AWK7508
AWK7528
AWK7521
AWK7537
AWK7525
AWK7561
AWK7532
AWK7534
AWK7542
Cch
SWch
SRch
SLch
VDD
UG
CK1
ST1
DT1
CK3
CK2
ST3
DT3
ST2
DT2
WUP
+15
-15

Q904 Q901 IC901 Q905 Q903 Q902 IC104 IC105
IC107 IC112

SIDE B


WK7528
AWX7306
AWX7393
AWX7399
AWX7406
AWX7424
AWX7425
AWX7340
AWX7410
AWX7428
AWX7421
AWX7418
AWX7465
PREOUT MUTE
RCH
LCH

(ANP7307-B)

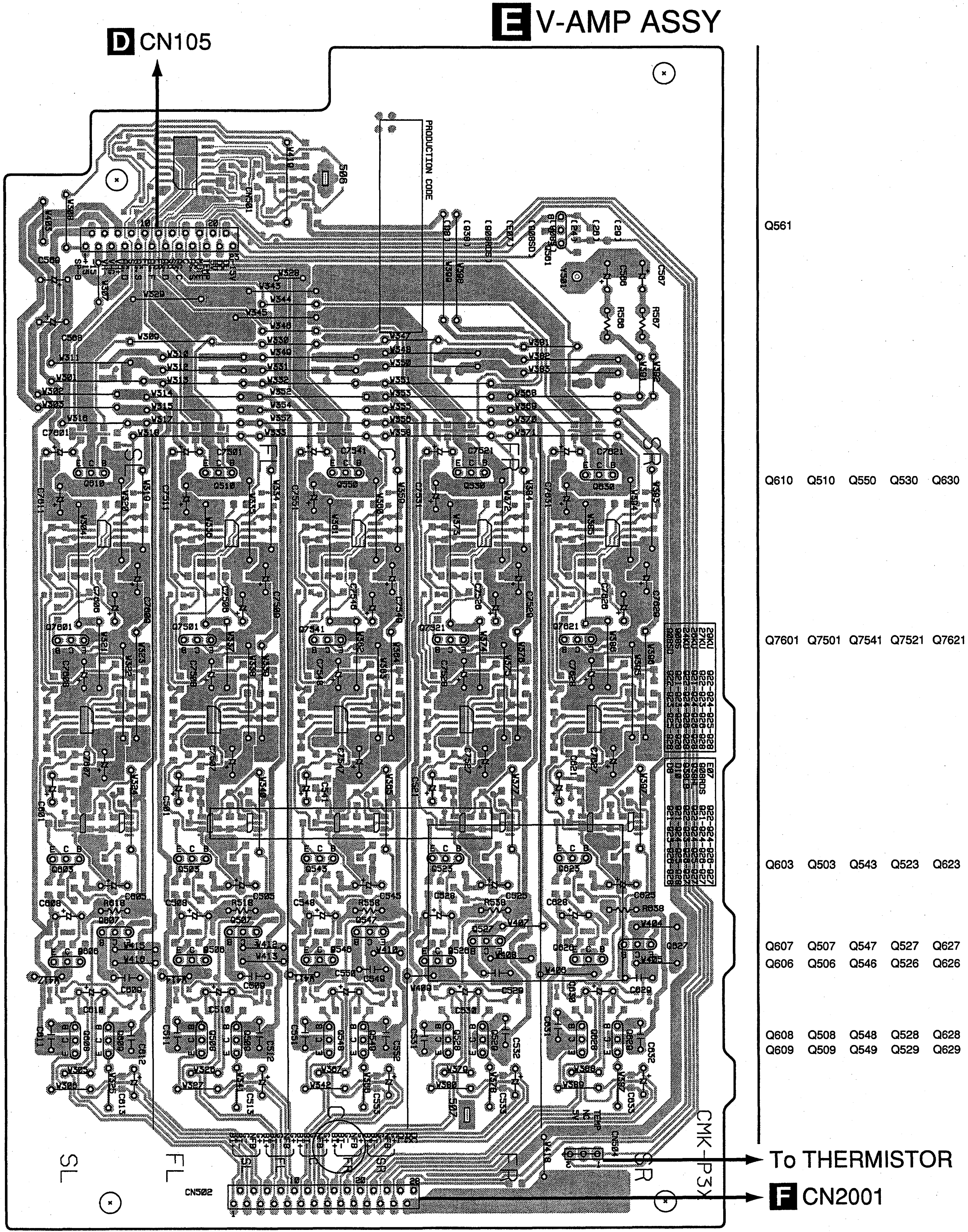
IC105

Q902
IC103
IC109

Q251 Q252
IC102
IC110

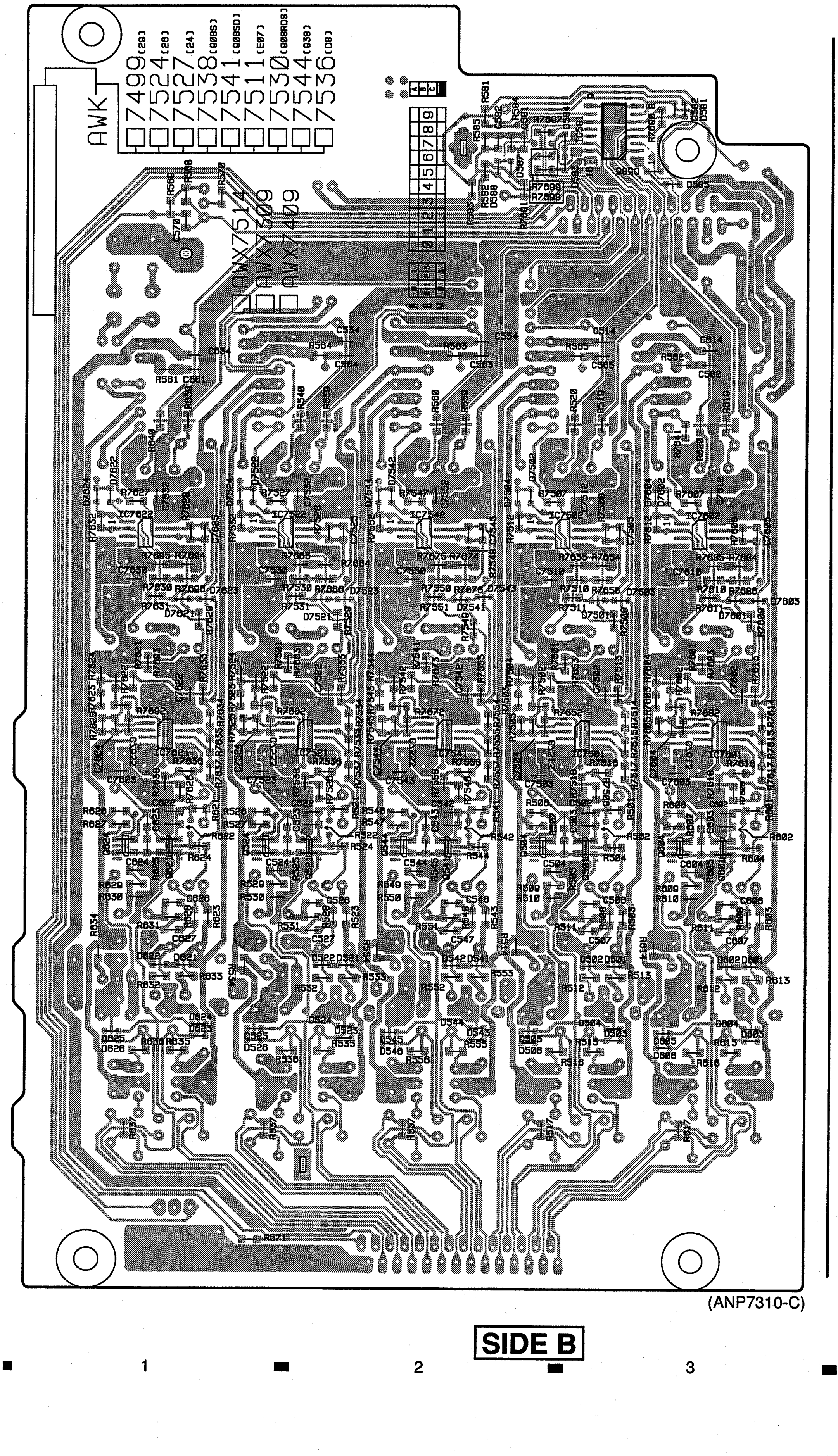
Q109 Q110
Q107 Q108
Q111 Q112

4.3 V-AMP ASSY


E V-AMP ASSY
D CN105
PRODUCTION CODE
Q561
Q610 Q510 Q550 Q530 Q630
Q7601 Q7501 Q7541 Q7521 Q7621
Q603 Q503 Q543 Q523 Q623
Q607 Q507 Q547 Q527 Q627
Q606 Q506 Q546 Q526 Q626
Q608 Q508 Q548 Q528 Q628
Q609 Q509 Q549 Q529 Q629
SL
FL
C
FR
SR
CMK-P3X
CN502
CN504
To THERMISTOR
F CN2001

(ANP7310-C)

E V-AMP ASSY


AWK
7499 (29)
7524 (28)
7527 (24)
7538 (908S)
7541 (908SD)
7511 (E07)
7530 (908RDS)
7544 (030)
7536 (D8)
AWX7514
AWX7509
AWX7409
0 1 2 3 4 5 6 7 8 9
IC7622
IC7522
IC7542
IC7502
IC7602
IC7621
IC7521
IC7541
IC7501
IC7601
R571

(ANP7310-C)

IC581

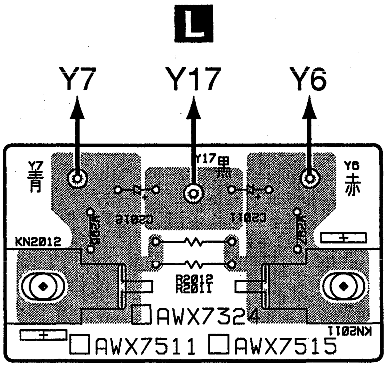
IC7622 IC7522 IC7542 IC7502 IC7602

IC7621 IC7521 IC7541 IC7501 IC7601

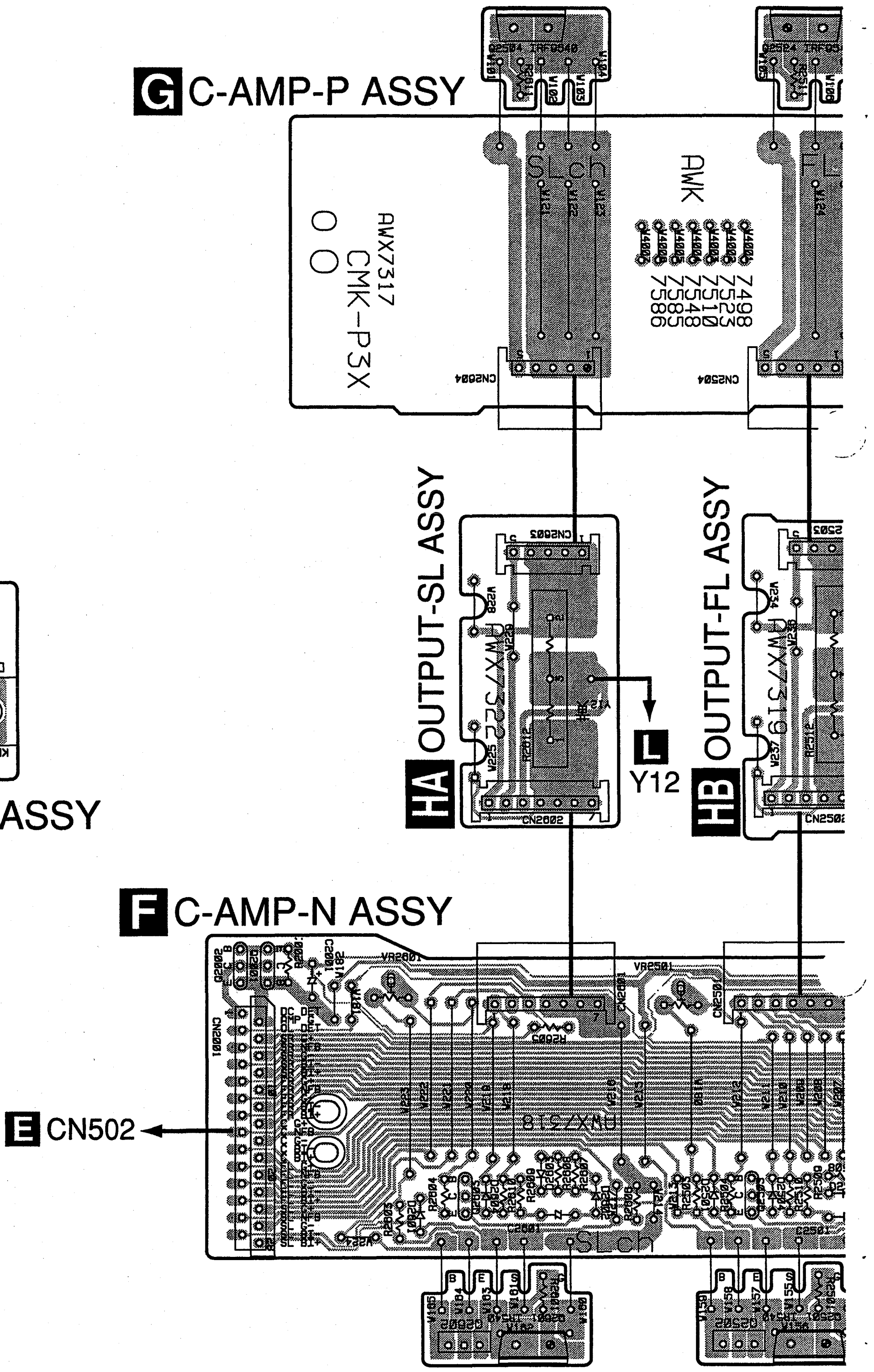
Q624 Q524 Q544 Q504 Q604
Q621 Q521 Q541 Q501 Q601

SIDE B

4.4 C-AMP-N, C-AMP-P, OUTPUT-SL, OUTPUT-FL, OUTPUT-C, OUTPUT-FR, OUTPUT-SR and VL-TERMINAL ASSYS

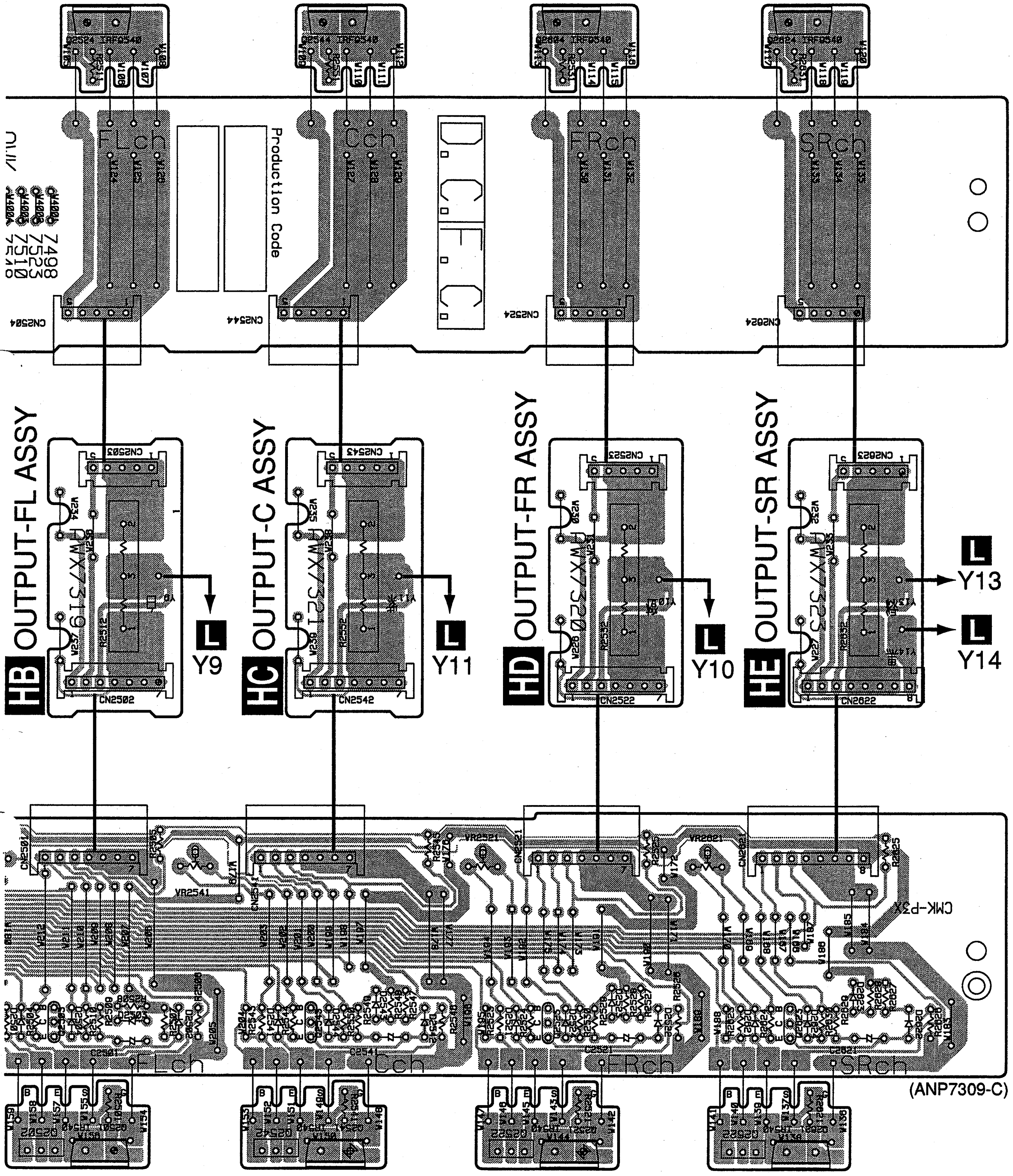

L
Y7
Y17
Y6
KN2012
KN2011
R2012
R2011
AWX7324
AWX7511
AWX7515

I VL-TERMINAL ASSY


G C-AMP-P ASSY
AWX7317
CMK-P3X
AWK
7498
7523
7510
7548
7585
7586
CN2604
CN2504
HA OUTPUT-SL ASSY
HB OUTPUT-FL ASSY
CN2603
CN2002
L
Y12
F C-AMP-N ASSY
VR2601
VR2501
CN2001
CN2501
E CN502
SLch

VR2601 VR2501

Q2002 Q2001 Q2603 Q2503
Q2602 Q2502


HB OUTPUT-FL ASSY
HC OUTPUT-C ASSY
HD OUTPUT-FR ASSY
HE OUTPUT-SR ASSY
L Y9
L Y11
L Y10
L Y13
L Y14
FLch
Cch
FRch
SRch
Production Code
CN2504
CN2544
CN2524
CN2624
CN2503
CN2543
CN2523
CN2623
CN2502
CN2542
CN2522
CN2622
CN2501
CN2541
CN2521
CN2621
VR2541
VR2521
VR2621
Q2524 IRF9540
Q2544 IRF9540
Q2604 IRF9540
Q2624 IRF9540
Q2502
Q2542
Q2522
Q2622
CMK-P3X
(ANP7309-C)

2501 VR2541 VR2521 VR2621

Q2503 Q2543 Q2523 Q2623
Q2502 Q2542 Q2522 Q2622

4.5 TRANS 2-1, DIODE, TRANS 1 and TRANS 2-2 ASSYS

● Line Voltage Selection

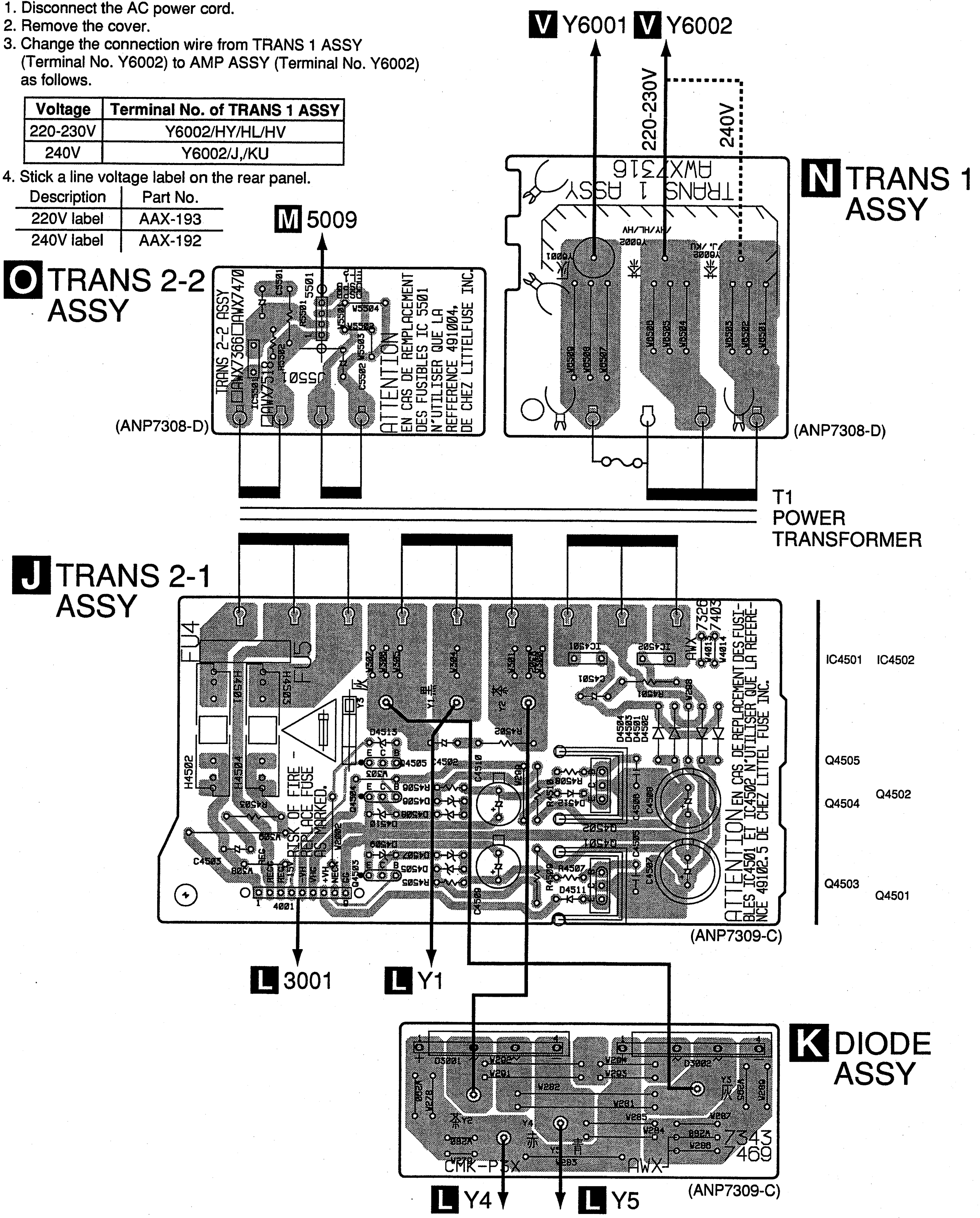
Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the connection wire from TRANS 1 ASSY (Terminal No. Y6002) to AMP ASSY (Terminal No. Y6002) as follows.

Voltage	Terminal No. of TRANS 1 ASSY
220-230V	Y6002/HY/HL/HV
240V	Y6002/J,/KU

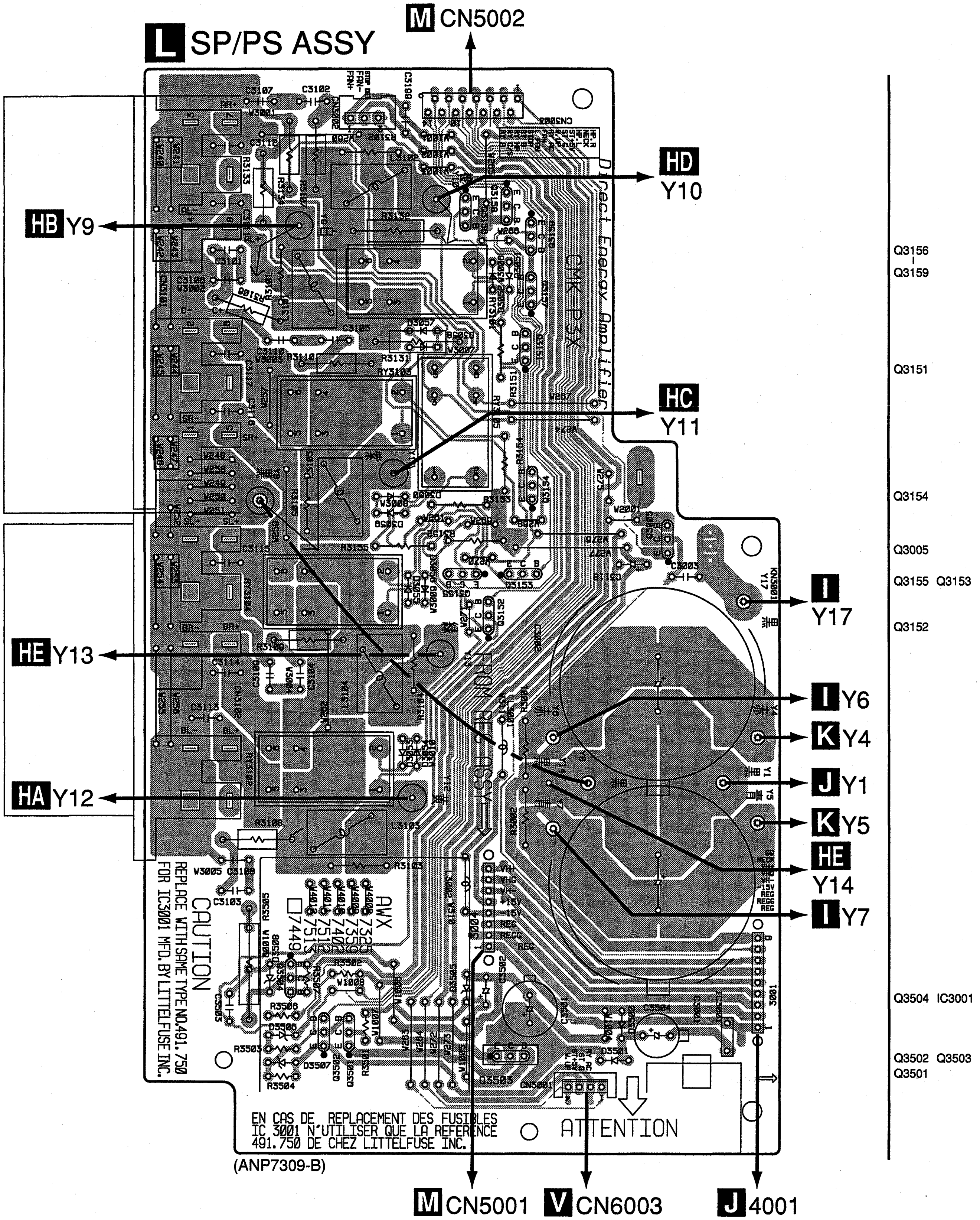
4. Stick a line voltage label on the rear panel.

Description	Part No.
220V label	AAX-193
240V label	AAX-192

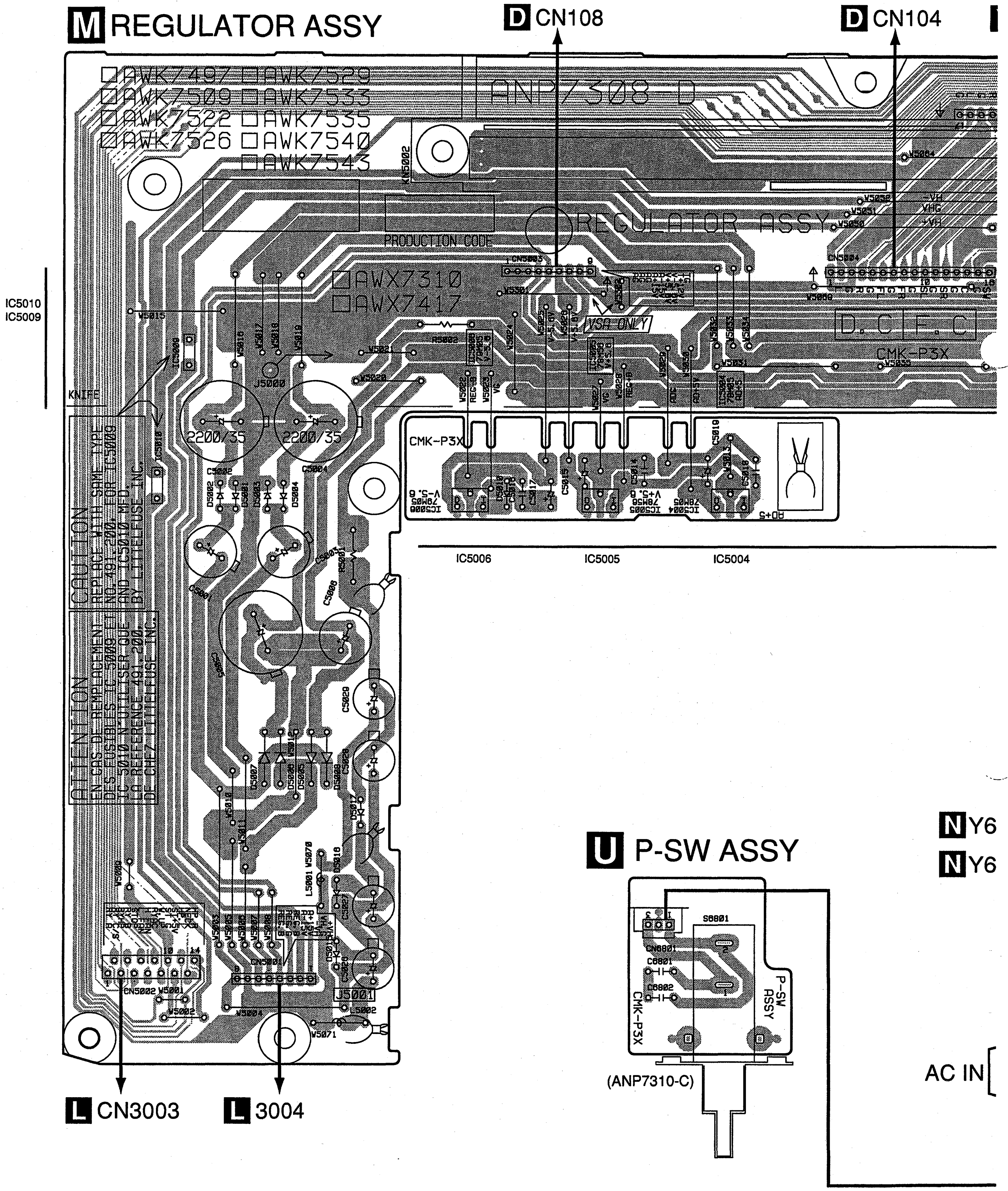

V Y6001
V Y6002
220-230V
240V
N TRANS 1 ASSY
TRANS 1 ASSY
AWX7316
M 5009
O TRANS 2-2 ASSY
TRANS 2-2 ASSY
ATTENTION
EN CAS DE REMPLACEMENT
DES FUSIBLES IC 5501
N'UTILISER QUE LA
REFFERENCE 491004,
DE CHEZ LITTELFUSE INC.
(ANP7308-D)
(ANP7308-D)
T1
POWER
TRANSFORMER
J TRANS 2-1 ASSY
RISK OF FIRE - REPLACE FUSE AS MARKED.
ATTENTION EN CAS DE REPLACEMENT DES FUSIBLES IC4501 ET IC4502 N'UTILISER QUE LA REFERENCE 49102.5 DE CHEZ LITTEL FUSE INC.
IC4501
IC4502
Q4505
Q4504
Q4502
Q4503
Q4501
(ANP7309-C)
L 3001
L Y1
K DIODE ASSY
(ANP7309-C)
L Y4
L Y5

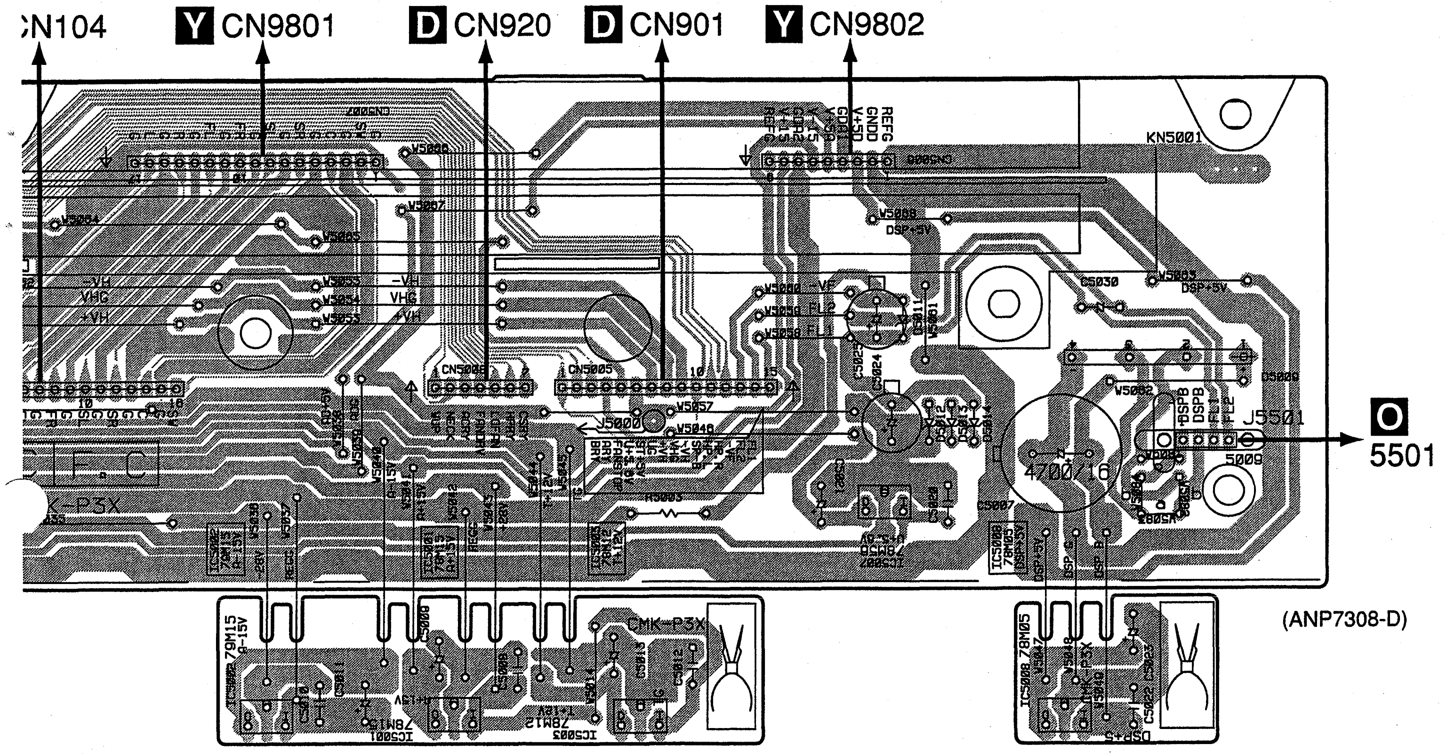
SIDE A

4.6 SP/PS ASSY


L SP/PS ASSY
M CN5002
HD Y10
HB Y9
HC Y11
I Y17
HE Y13
I Y6
K Y4
J Y1
HA Y12
K Y5
HE Y14
I Y7
M CN5001
V CN6003
J 4001
(ANP7309-B)
Direct Energy Amplifier
CMK P3X
FROM REG ASSY
AWX
CAUTION
REPLACE WITH SAME TYPE NO.491.750
FOR IC3001 MFD.BY LITTELFUSE INC.
EN CAS DE REPLACEMENT DES FUSIBLES
IC 3001 N'UTILISER QUE LA REFERENCE
491.750 DE CHEZ LITTELFUSE INC.
ATTENTION
Q3156
Q3159
Q3151
Q3154
Q3005
Q3155 Q3153
Q3152
Q3504 IC3001
Q3502 Q3503
Q3501

4.7 REGULATOR, PRIMARY and P-SW ASSYS

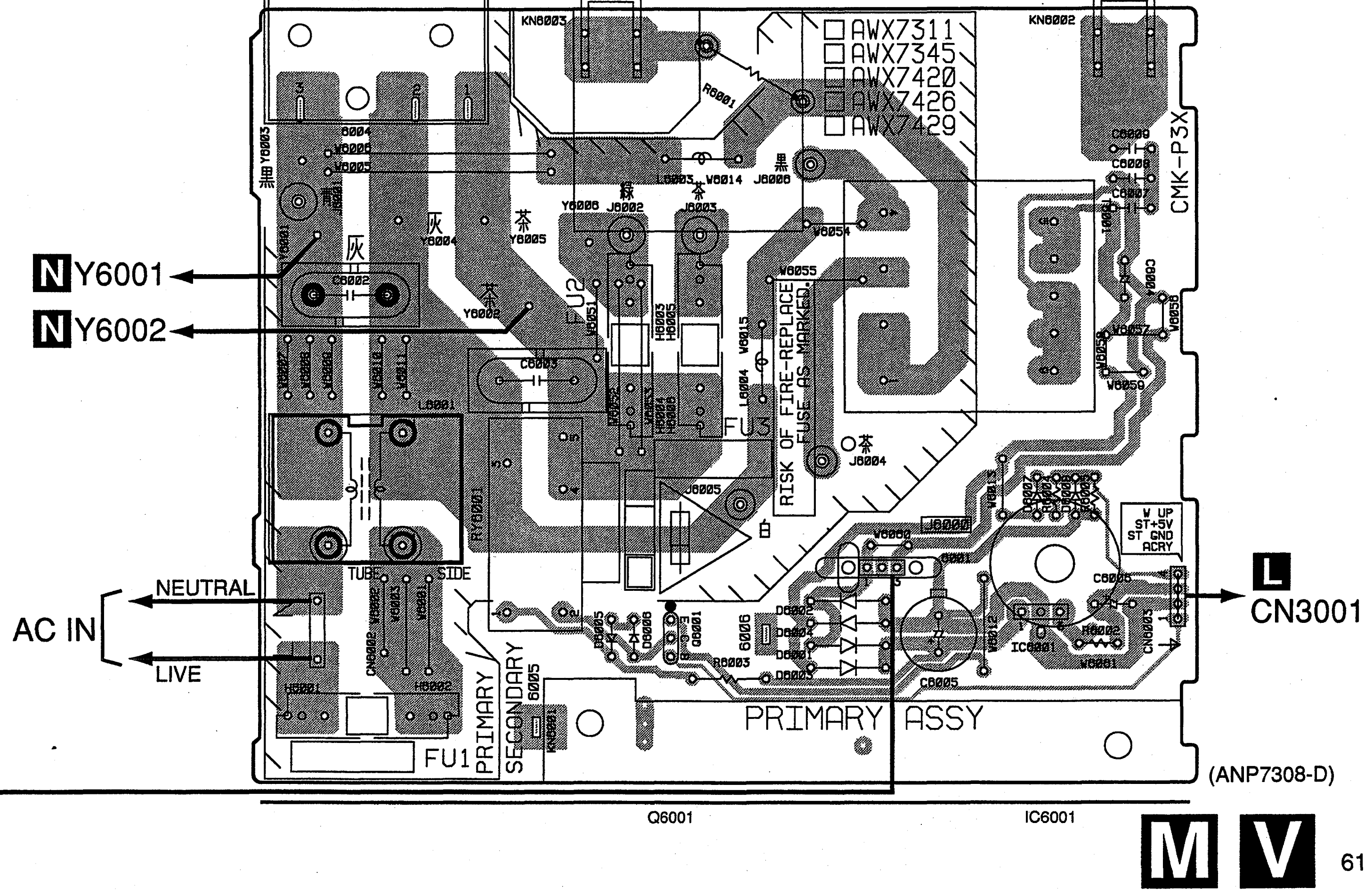

M REGULATOR ASSY
D CN108
D CN104
☐AWK7497 ☐AWK7529
☐AWK7509 ☐AWK7533
☐AWK7522 ☐AWK7535
☐AWK7526 ☐AWK7540
☐AWK7543
ANP7308-D
REGULATOR ASSY
PRODUCTION CODE
☐AWX7310
☐AWX7417
VSA ONLY
D.C F.C
CMK-P3X
IC5010
IC5009
KNIFE
CAUTION
REPLACE WITH SAME TYPE NO.491.200. FOR IC5009 AND IC5010 MFD. BY LITTELFUSE INC.
ATTENTION
EN CAS DE REMPLACEMENT DES FUSIBLES IC 5009 ET IC 5010 N'UTILISER QUE LA REFERENCE 491.200. DE CHEZ LITTELFUSE INC.
2200/35
2200/35
J5000
CN5003
CN5004
CN5001
CN5002
J5001
IC5006
IC5005
IC5004
L CN3003
L 3004
U P-SW ASSY
S8801
CN8801
C8801
C8802
P-SW ASSY
CMK-P3X
(ANP7310-C)
N Y6
N Y6
AC IN


CN104
Y CN9801
D CN920
D CN901
Y CN9802
O 5501
J5501
KN5001
CMK-P3X
4700/16

(ANP7308-D)

IC5002 IC5001 IC5003 IC5007 IC5008

V PRIMARY ASSY


N Y6001
N Y6002
AC IN
NEUTRAL
LIVE
L CN3001
☐ AWX7311
☐ AWX7345
☐ AWX7420
☐ AWX7426
☐ AWX7429
RISK OF FIRE-REPLACE FUSE AS MARKED.
FU1
FU2
FU3
PRIMARY
SECONDARY
PRIMARY ASSY
CMK-P3X
KN6003
KN6002
TUBE
SIDE

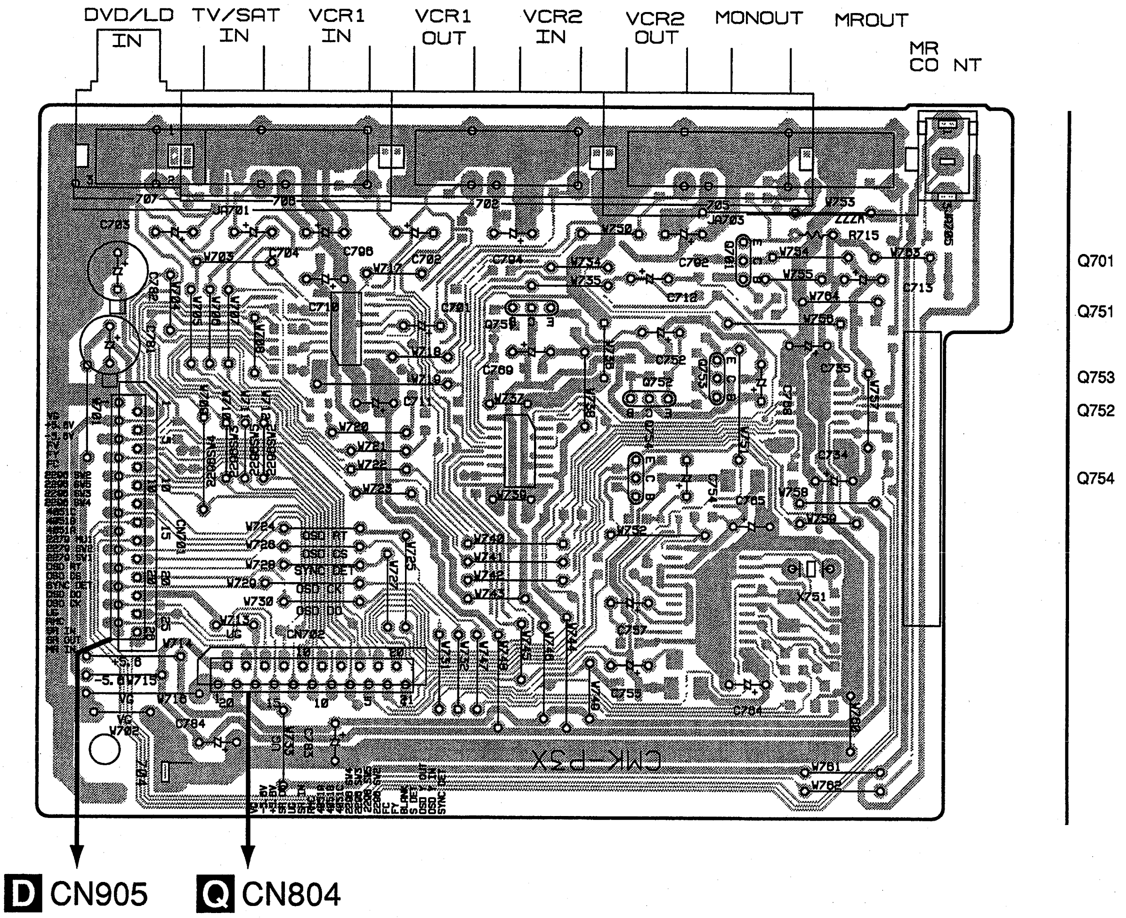
(ANP7308-D)

Q6001 IC6001

4.8 VIDEO ASSY

A

P VIDEO ASSY

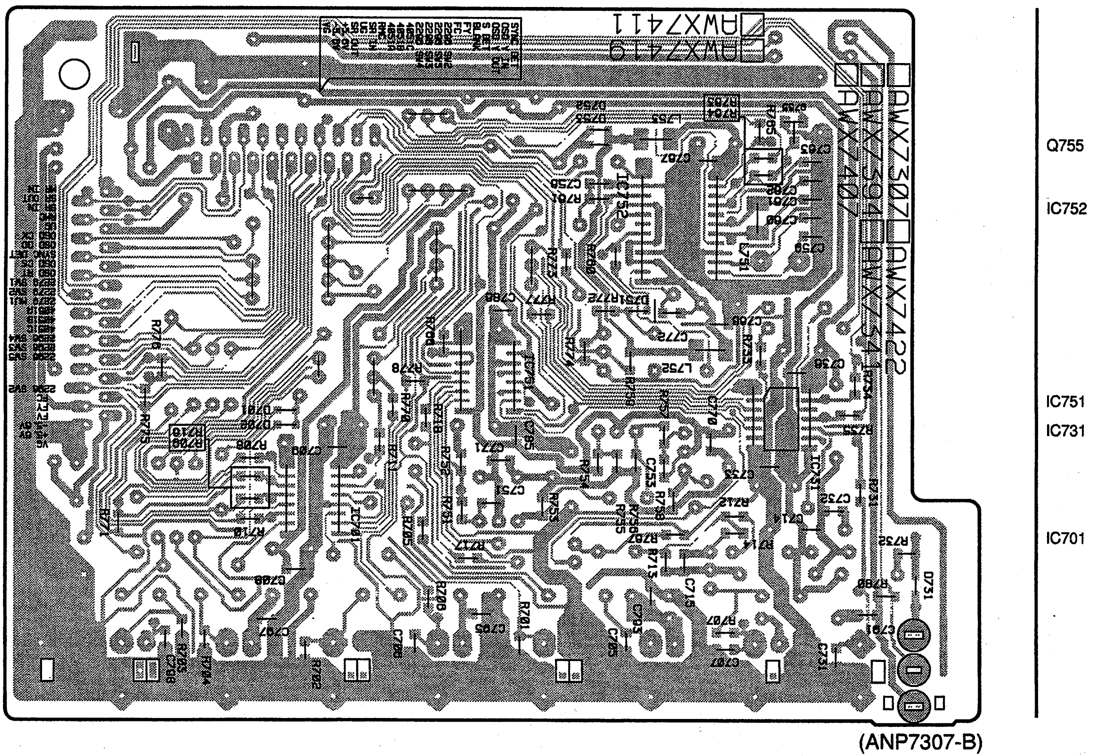

DVD/LD IN
TV/SAT IN
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
MONOUT
MROUT
MR CO NT
JA701
CN701
CN702
IC751
CMK-P3X
D CN905
Q CN804
Q701
Q751
Q753
Q752
Q754

B

SIDE A

C

P VIDEO ASSY

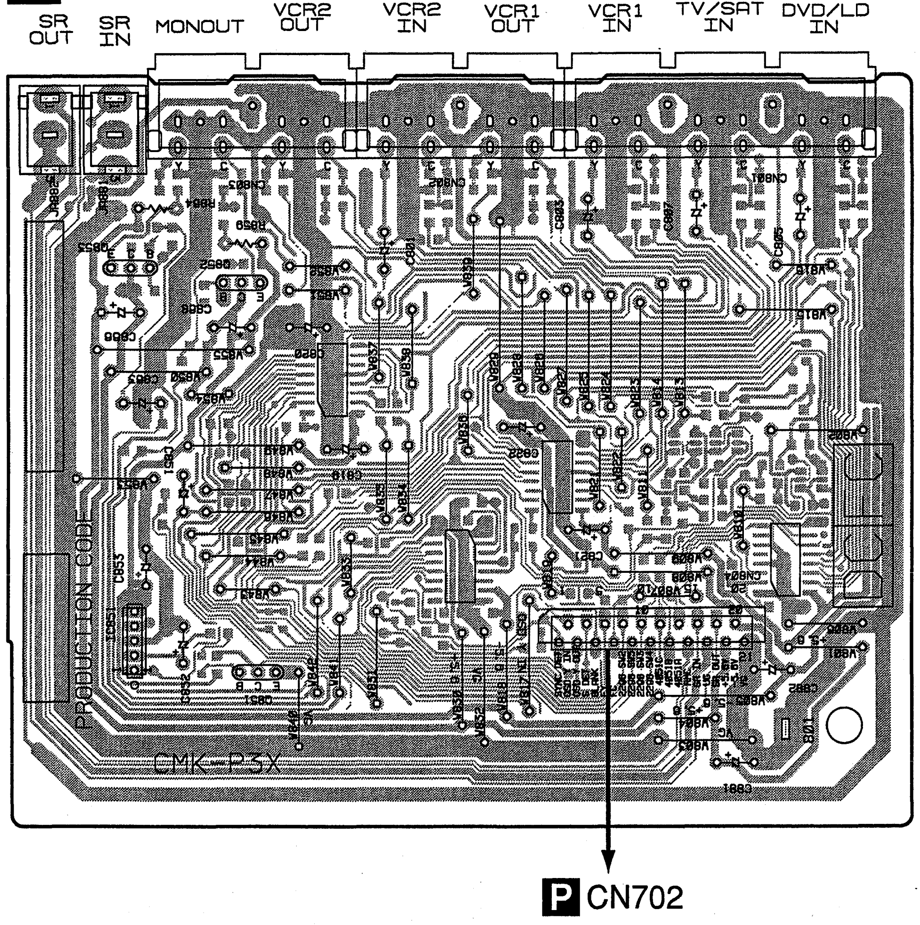

AWX7411
AWX7419
AWX7307
AWX7394
AWX7422
AWX7407
AWX7341
IC752
IC731
Q755
IC752
IC751
IC731
IC701

D

SIDE B

4.9 S-VIDEO ASSY

Q S-VIDEO ASSY

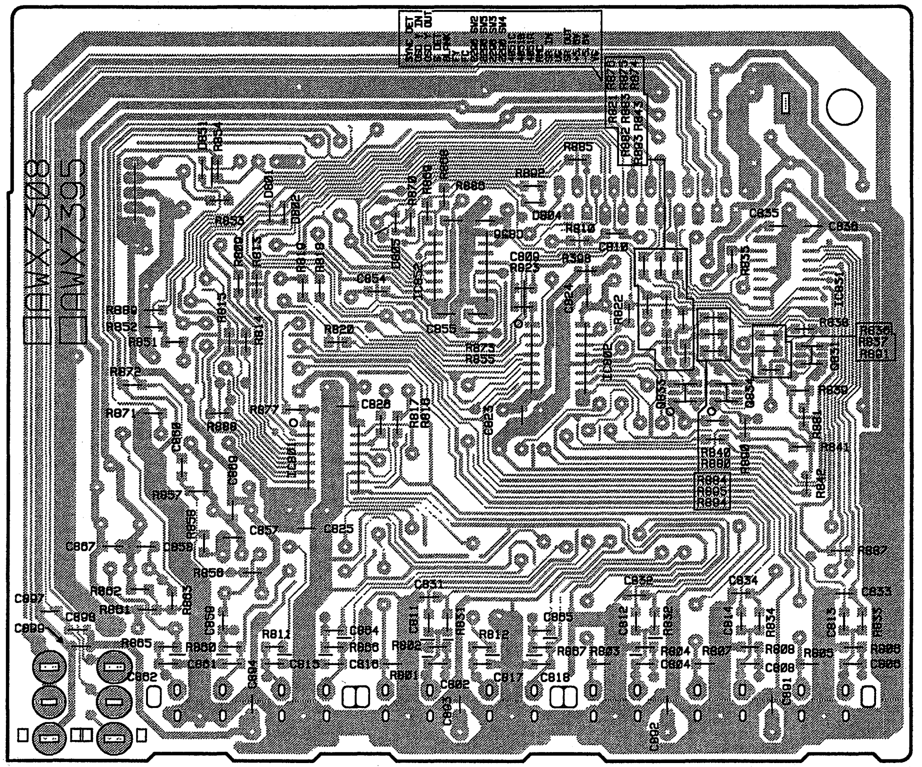

SR OUT
SR IN
MONOUT
VCR2 OUT
VCR2 IN
VCR1 OUT
VCR1 IN
TV/SAT IN
DVD/LD IN
PRODUCTION CODE
CMK-P3X
P CN702

Q853 Q852

IC851 Q851

SIDE A

Q S-VIDEO ASSY


ANWX7308
ANWX7395

IC852 IC831

IC802 Q831

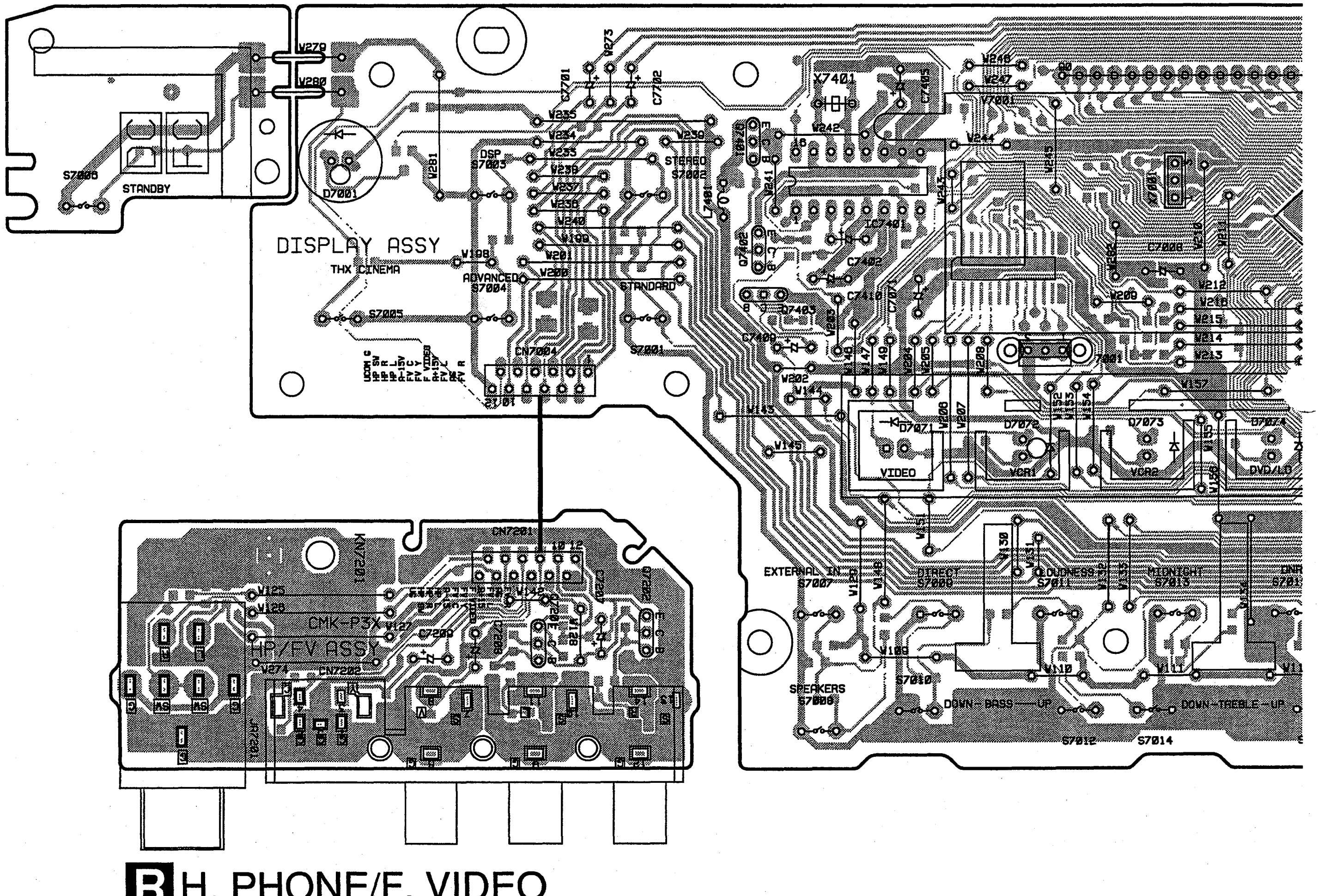
Q833 Q834

IC801

SIDE B

4.10 H. PHONE/F. VIDEO, DISPLAY and ROTARY ENCODER ASSYS

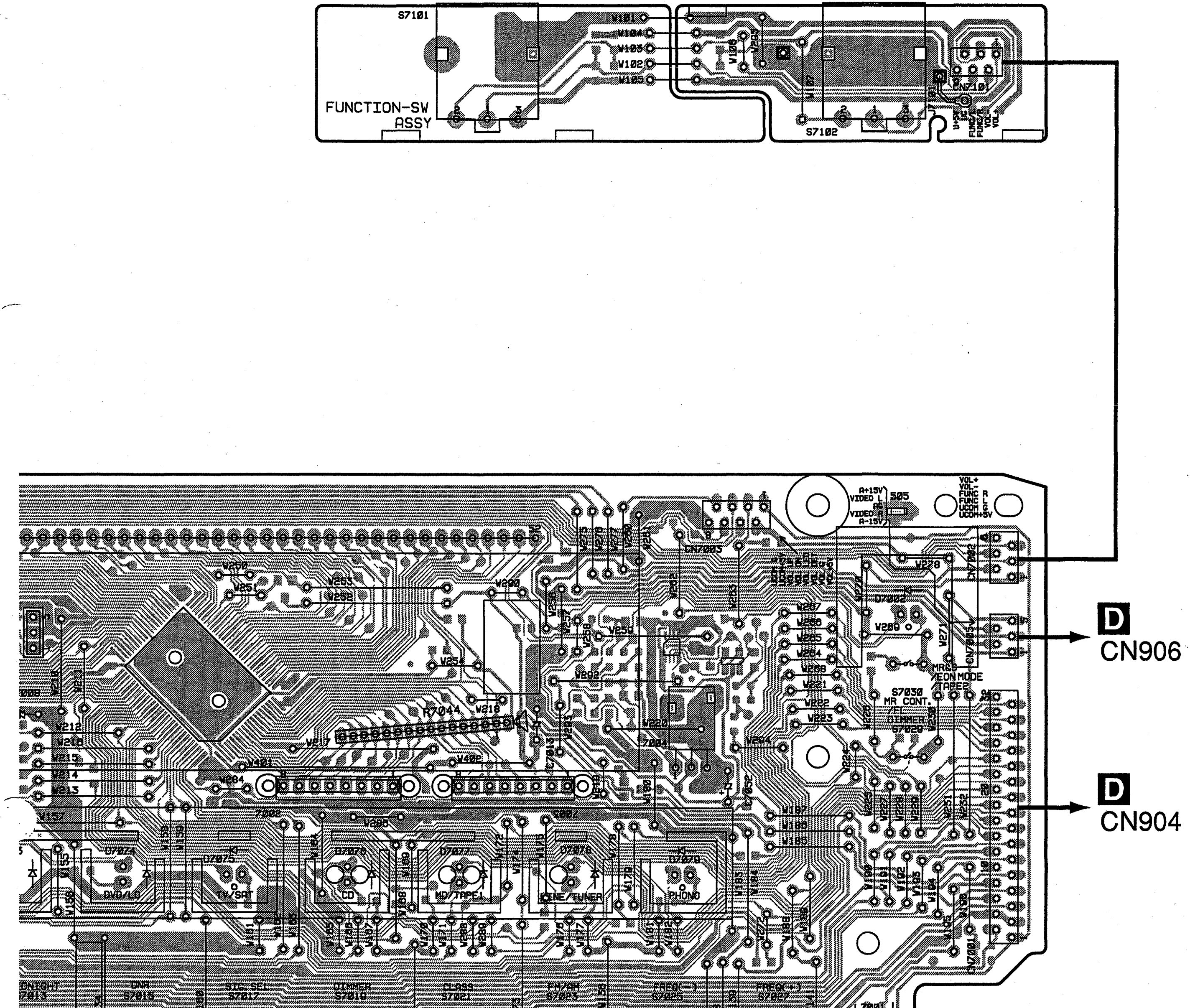
S DISPLAY ASSY


V279
V280
S7000
STANDBY
D7001
DISPLAY ASSY
THX CINEMA
S7005
V198
DSP S7003
ADVANCED S7004
STANDARD
STEREO S7002
S7001
CN7004
C7701
C7702
X7401
IC7401
C7402
C7410
Q7401
Q7402
Q7403
C7405
C7408
V7001
D7071
D7072
Q7073
D7074
VIDEO
VCR1
VCR2
DVD/LD
EXTERNAL IN S7007
DIRECT S7009
LOUDNESS S7011
MIDNIGHT S7013
SPEAKERS S7008
S7010
DOWN - BASS - UP
S7012
DOWN - TREBLE - UP
S7014
CN7201
KN7201
CMK-P3X
HP/FV ASSY
CN7202
V125
V126
V127
V274
C7200
JA7201

R H. PHONE/F. VIDEO ASSY

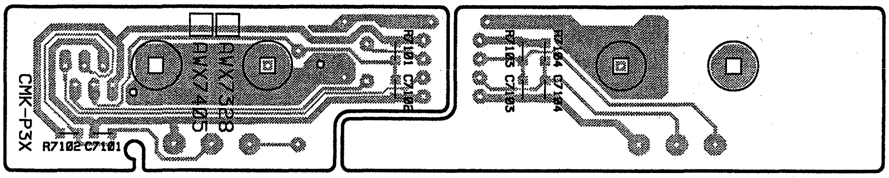
Q7201 Q7202 Q7401 IC7401
Q7403

T ROTARY ENCODER ASSY

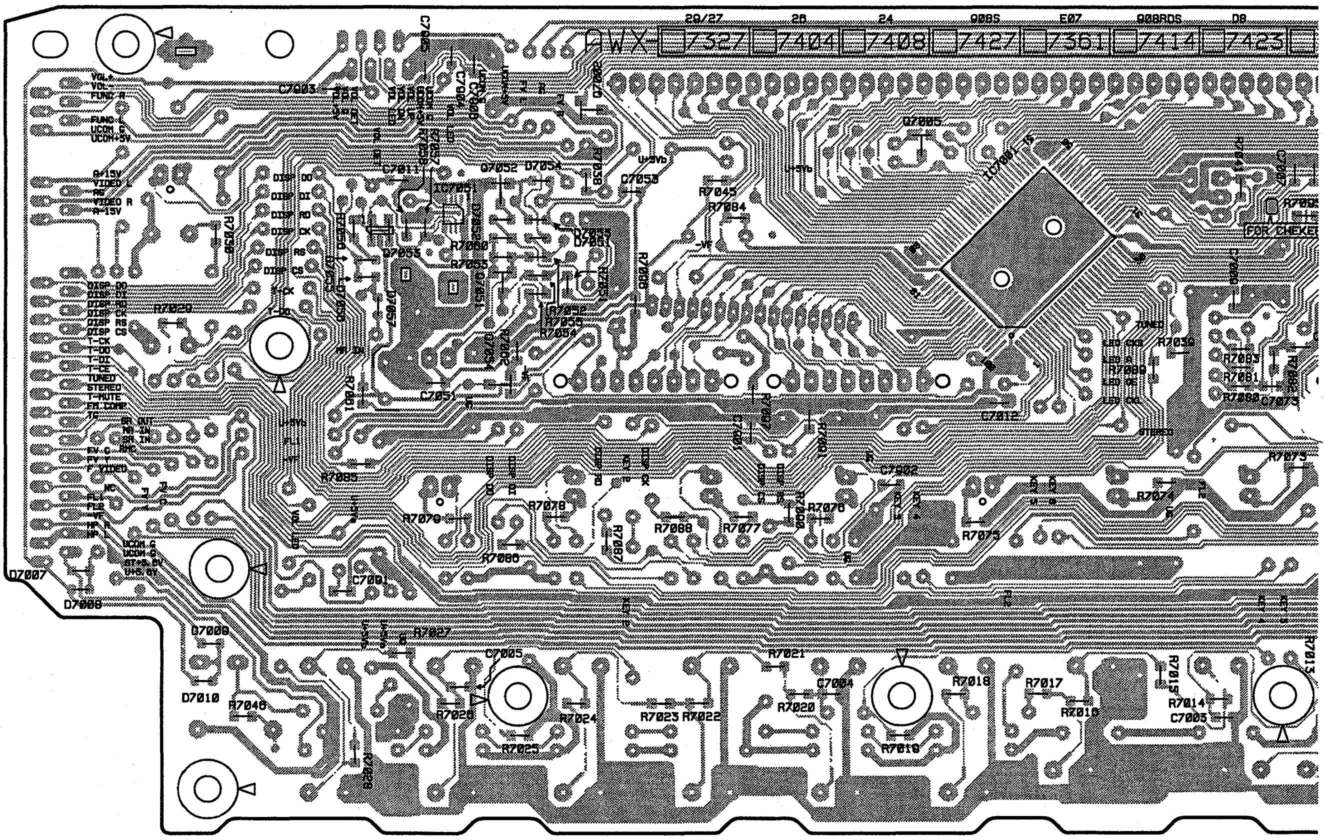

S7101
FUNCTION-SW ASSY
S7102
CN7101
CN7003
CN7002
CN7005
D
CN906
D
CN904
DVD/LD
TV/SAT
CD
MD/TAPE1
LINE/TUNER
PHONO
DNR
S7015
SIG. SEL
S7017
DIMMER
S7019
CLASS
S7021
FM/AM
S7023
FREQ(−)
S7025
FREQ(+)
S7027
DOWN−TREBLE−UP
S7016
S7018
S7020
TAPE2 MONITOR
INPUT ATT
S7022
MPX
S7024
MEMORY
S7026
ST(−)
S7028
C7010
ST(+)
L7001
R7044
S7030
MR CONT.
/FL DIMMER
S7029
MRES
/EON MODE
/TAPE2

(ANP7010-C)

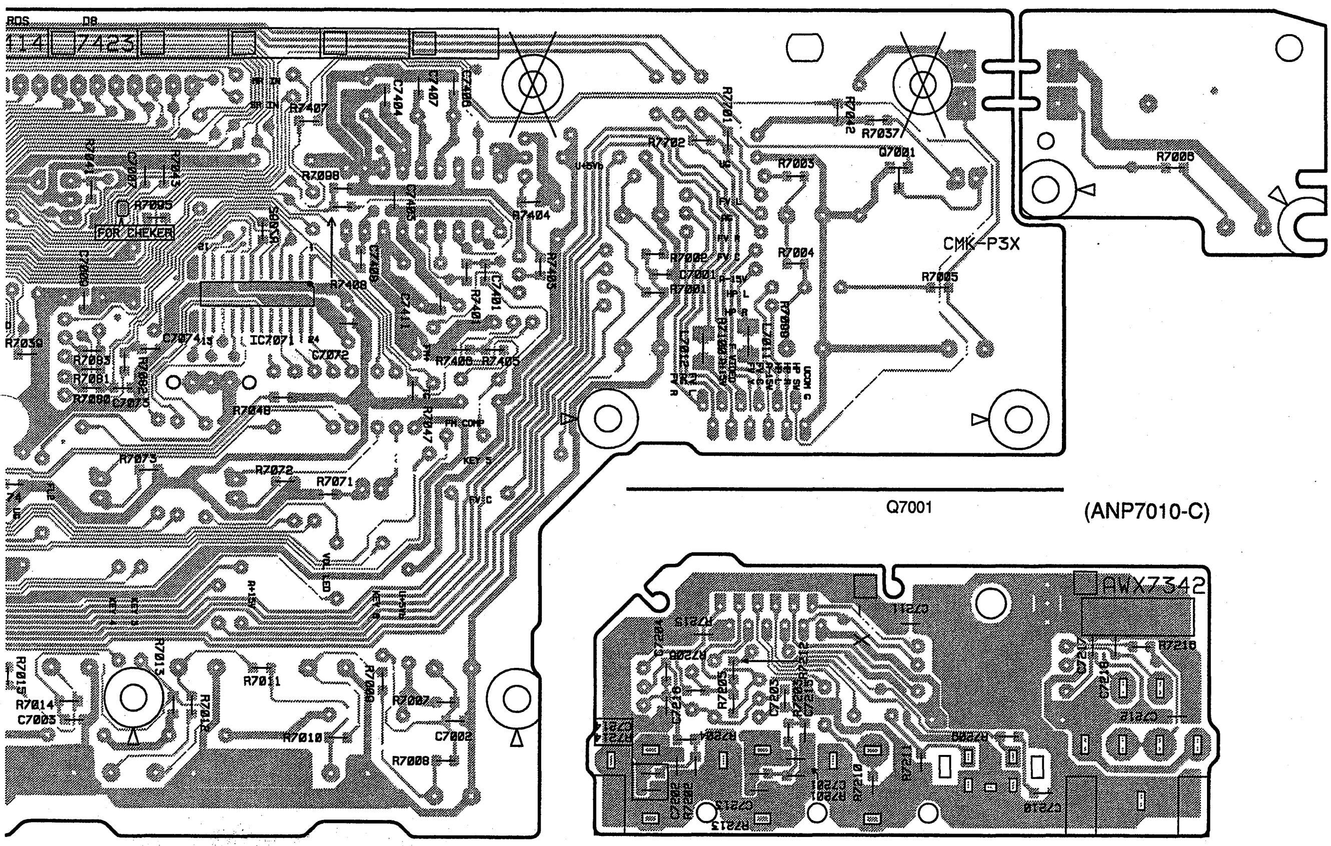
T ROTARY ENCODER ASSY


AWX7328
AWX7405
CMK-P3X
R7102
C7101
R7101
C7102
R7105
C7105
R7104
C7104

S DISPLAY ASSY


AWX-
7327
7404
7408
7427
7361
7414
7423
29/27
26
24
908S
E07
908RDS
D8
IC7001
IC7051
Q7005
Q7052
Q7053
Q7055
C7003
C7051
C7053
C7012
R7020
R7027
R7046
D7007
D7008
D7009
D7010
FOR CHEKER

Q7053 Q7052 Q7002 Q7005 IC7001
IC7051
Q7051 Q7054

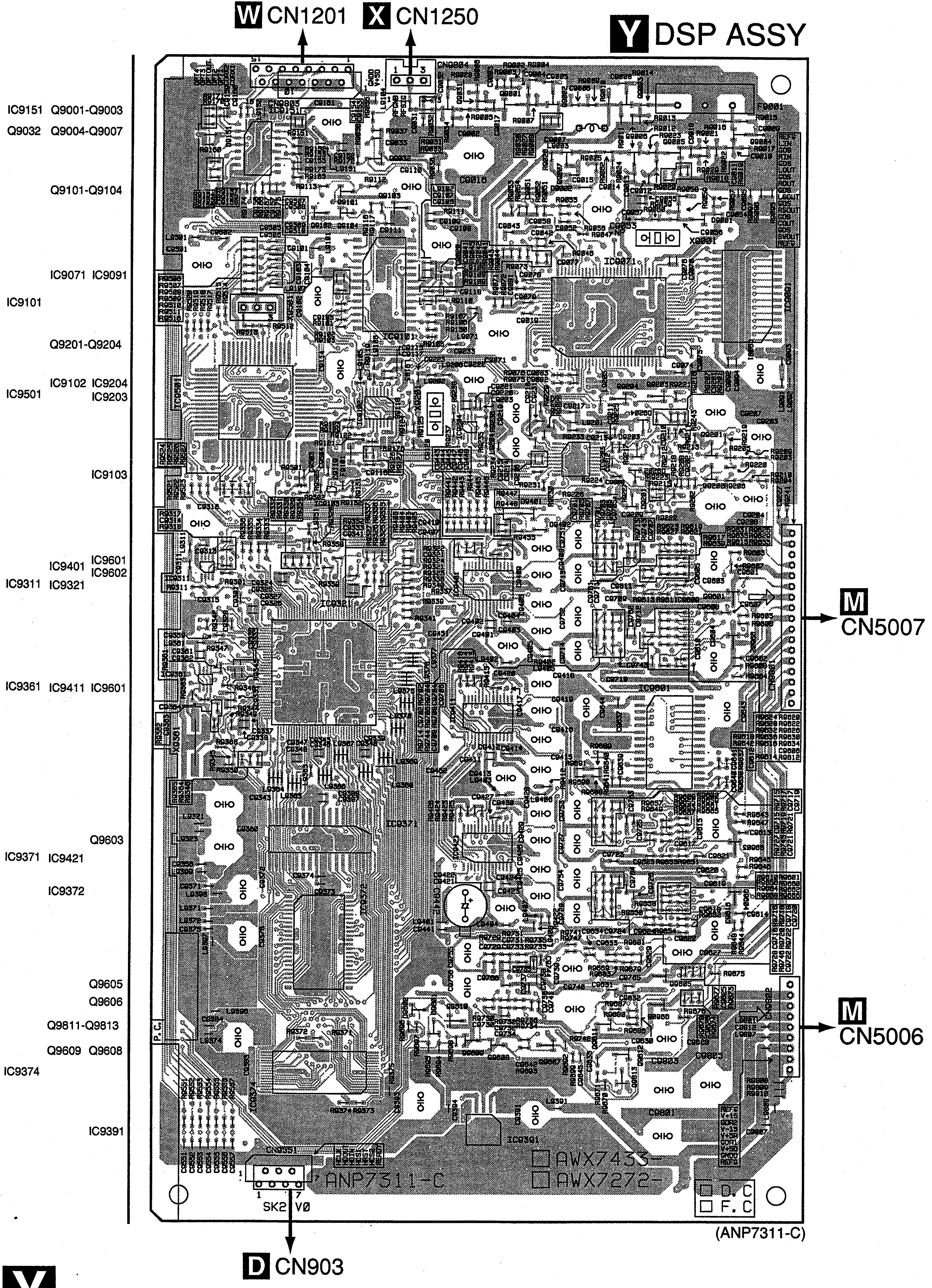

RDS
DB
7423
R7407
C7404
C7407
C7406
R7098
R7095
FOR CHEKER
R7039
R7083
R7081
R7080
C7075
C7074
IC7071
C7072
R7408
R7404
R7401
R7403
R7400
R7405
R7047
FM COMP
KEY 5
R7073
R7072
R7071
R7013
R7015
R7014
C7003
R7011
R7012
R7010
R7007
R7008
C7002
R7701
R7702
R7042
R7037
Q7001
R7003
R7004
R7005
R7006
R7008
C7001
R7001
CMK-P3X
Q7001
(ANP7010-C)
AWX7342
R7216
C7212
R7213
R7211
C7210
R7201
C7201
C7202
R7202
R7204
R7205
R7206
C7204

R H. PHONE/F. VIDEO
ASSY

IC7071

SIDE B

4.11 DSP ASSY


W CN1201
X CN1250
Y DSP ASSY
IC9151 Q9001-Q9003
Q9032 Q9004-Q9007
Q9101-Q9104
IC9071 IC9091
IC9101
Q9201-Q9204
IC9102 IC9204
IC9501 IC9203
IC9103
IC9601
IC9401 IC9602
IC9311 IC9321
IC9361 IC9411 IC9601
Q9603
IC9371 IC9421
IC9372
Q9605
Q9606
Q9811-Q9813
Q9609 Q9608
IC9374
IC9391
M CN5007
M CN5006
ANP7311-C
AWX7433
AWX7272
D.C
F.C
SK2 V0
(ANP7311-C)
D CN903

SIDE A

Y DSP ASSY

IC9041

IC9201

Q9205

IC9202

IC9701

IC9602

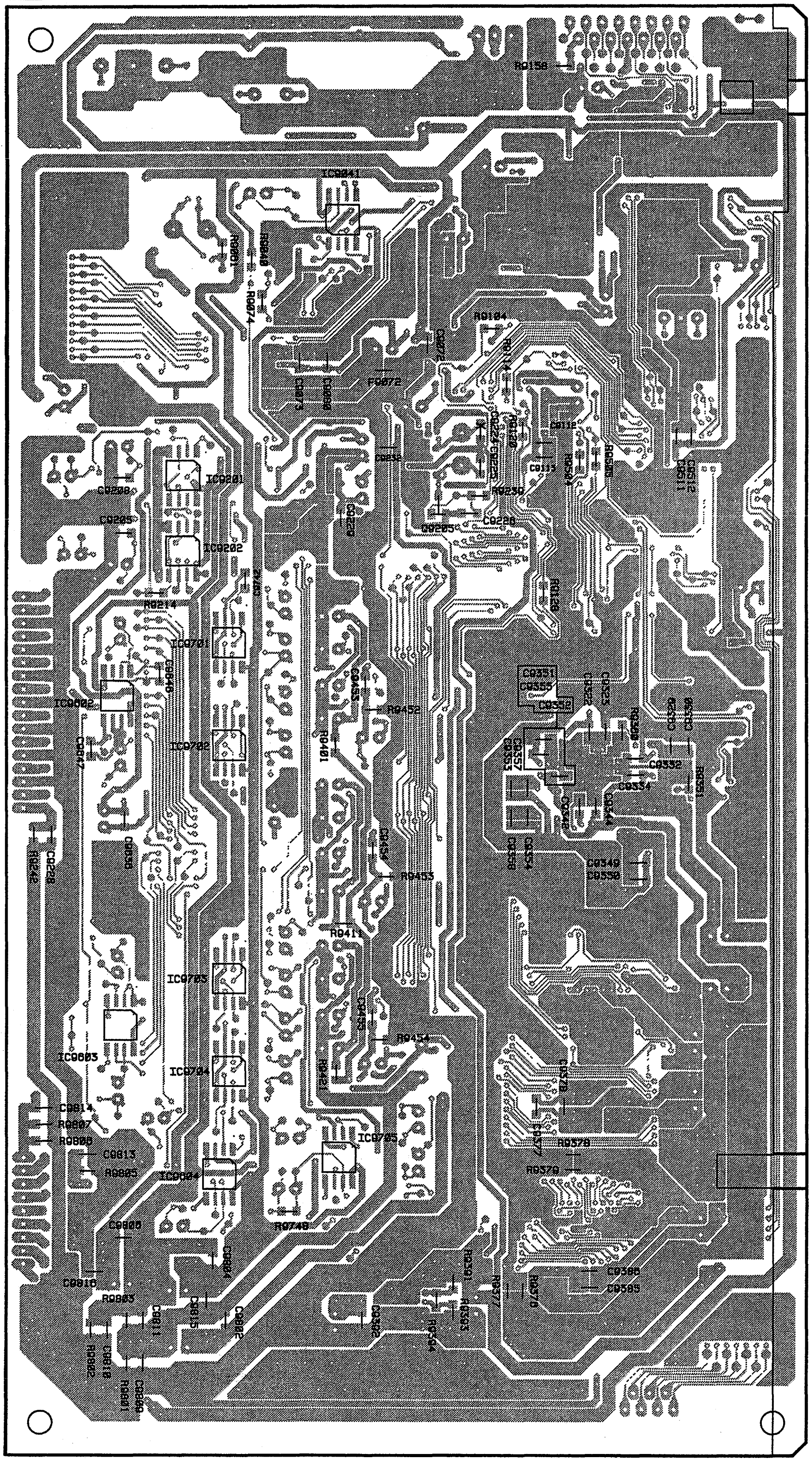
IC9702

IC9703

IC9603

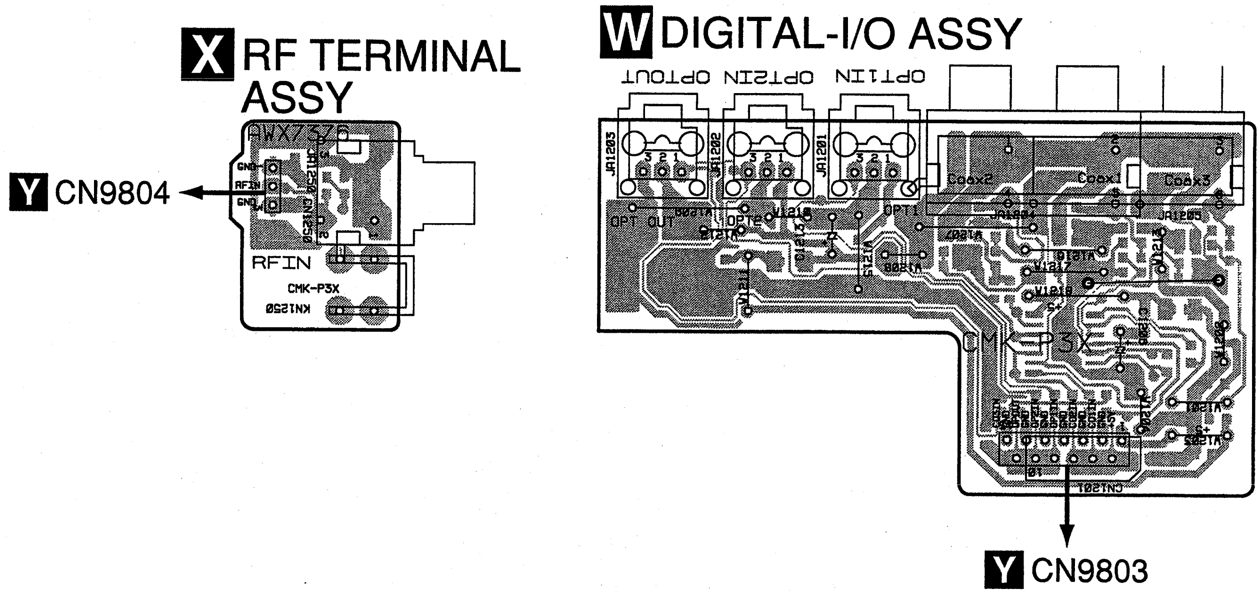
IC9704

IC9604 IC9705

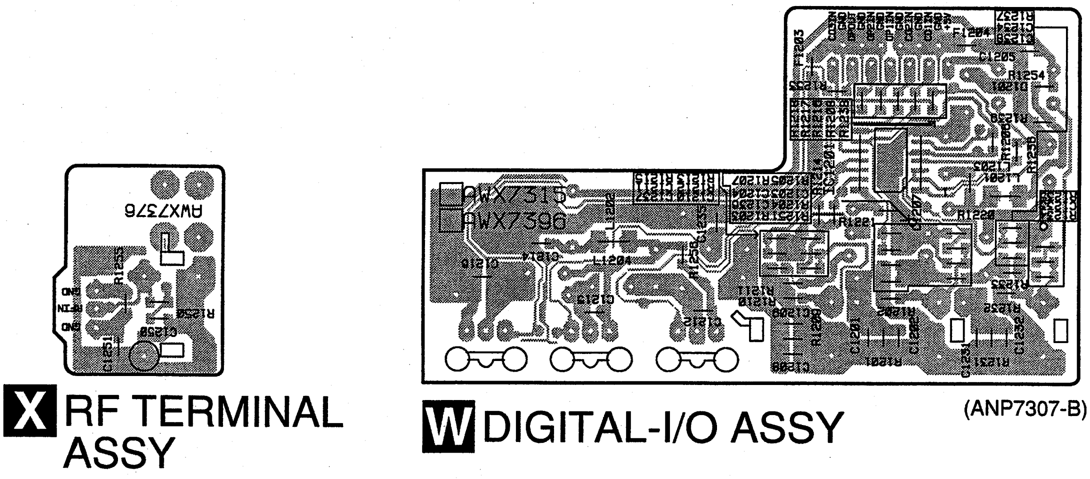

R0158
IC9041
R9840
R9074
R0104
C9072
F9072
C9073
C9090
C9232
IC9201
C9208
C9205
IC9202
R9214
Q9205
C9220
R9230
C9112
C9113
R9130
IC9701
C9640
IC9602
C9647
IC9702
C9351
C9355
C9352
C9332
C9334
C9340
C9350
R9452
R9401
R9453
R9411
R9454
C9228
R9242
IC9703
IC9603
IC9704
C9814
R9807
R9806
C9813
R9805
IC9604
IC9705
R9740
R9379
R9378
C9386
C9385
C9806
C9810
R9803
C9804
C9811
C9815
C9802
C9392
R9803
R9802
C9818
R9801
C9800
R9377
R9370
R9393
R9394

(ANP7311-C)

4.12 DIGITAL-I/O and RF TERMINAL ASSYS


X RF TERMINAL ASSY
W DIGITAL-I/O ASSY
Y CN9804
Y CN9803
AWX7376
RFIN
CMK-P3X
KN1250
GND
OPTOUT
OPT2IN
OPT1IN
JA1203
JA1202
JA1201
Coax2
Coax1
Coax3
OPT OUT
OPT1
CMK-P3X
CN1201

SIDE A


X RF TERMINAL ASSY
W DIGITAL-I/O ASSY
AWX7376
AWX7315
AWX7396
R1253
R1252
C1250
C1251
L1202
L1204
C1205
R1254
F1204
IC1201
C1201
C1208
R1201
R1221
R1220
(ANP7307-B)

SIDE B

5. PCB PARTS LIST

NOTES: ●*The* ⚠ *mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56×10^1 → 561 .... RD1/4PU $\boxed{5}\boxed{6}\boxed{1}$ *J*
47k Ω → 47×10^3 → 473 .... RD1/4PU $\boxed{4}\boxed{7}\boxed{3}$ *J*
0.5 Ω → R50 .... RN2H $\boxed{R}\boxed{5}\boxed{0}$ *K*
1 Ω → 1R0 .... RS1P $\boxed{1}\boxed{R}\boxed{0}$ *K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562×10^1 → 5621 .... RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ *F*

Mark	No. Description	Part No.
NSP	MAIN ASSY	AWK7528
NSP	├ RF TERMINAL ASSY	AWX7376
	├ S-VIDEO ASSY	AWX7395
	├ DIGITAL-I/O ASSY	AWX7396
	├ MAIN CONTROL ASSY	AWX7410
	└ VIDEO ASSY	AWX7422
NSP	COMPLEX ASSY (EXCEPT HV TYPE)	AWK7529
NSP	COMPLEX ASSY (ONLY HV TYPE)	AWK7557
	├ REGULATOR ASSY	AWX7310
	├ PRIMARY ASSY (EXCEPT HV TYPE)	AWX7345
	├ PRIMARY ASSY (ONLY HV TYPE)	AWX7454
	├ CONNECTION ASSY	AWX7347
	├ A-PINJACK ASSY	AWX7412
	├ EXTERNAL IN ASSY	AWX7413
	├ TRANS 2-2 ASSY	AWX7518
	└ TRANS 1 ASSY	AWX7316
NSP	FRONT/VAMP ASSY	AWK7530
	├ V-AMP ASSY	AWX7309
	├ P-SW ASSY	AWX7330
	├ H.PHONE/F.VIDEO ASSY	AWX7342
NSP	├ ROTARY ENCODER	AWX7405
	└ DISPLAY ASSY	AWX7414
NSP	POWER/CURRENT ASSY	AWK7510
NSP	├ C-AMP-P ASSY	AWX7317
	├ C-AMP-N ASSY	AWX7318
NSP	├ OUTPUT-FL ASSY	AWX7319
NSP	├ OUTPUT-FR ASSY	AWX7320
	├ OUTPUT-C ASSY	AWX7321
NSP	├ OUTPUT-SL ASSY	AWX7322
NSP	├ OUTPUT-SR ASSY	AWX7323
	├ VL-TERMINAL ASSY	AWX7324
	├ DIODE ASSY	AWX7343
	├ SP/PS ASSY	AWX7359
	└ TRANS 2-1 ASSY	AWX7403
	DSP ASSY	AWX7272

A EXTERNAL IN ASSY

CAPACITORS

No.	Description	Part No.
C1101–C1106		CCCSL101J50
C1107–C1112		CEAT4R7M50
C1113–C1115		CKCYF103Z50

RESISTORS

No.	Description	Part No.
All Resistors		RD1/4PU□□□J

OTHERS

No.	Description	Part No.
JA1101–JA1103	2P PIN JACK	AKB7095
CN1101	8P SOCKET	KP200TA8L

B A-PINJACK ASSY

CAPACITORS

No.	Description	Part No.
C1001–C1018		CCCSL101J50
C1019–C1022		CKCYF103Z50

RESISTORS

No.	Description	Part No.
All Resistors		RD1/4PU□□□J

OTHERS

No.	Description	Part No.
JA1011-JA1013,JA1015	4P PIN JACK	AKB7048
1016	2P PINJACK	AKB7120
CN1001	18P SOCKET	KP200TA18L
CN1002	4P SOCKET	KP200TA4L

C CONNECTION ASSY

SEMICONDUCTORS

No.	Description	Part No.
IC1351		M5220P
IC1301–IC1303		NJM4558D-D

COILS AND FILTERS

No.	Description	Part No.
L1351–L1354		LAU181J

CAPACITORS

No.	Description	Part No.
C1353, C1354		CCCSL181J50
C1301–C1306		CCCSL331J50
C1351, C1352		CEAT100M50
C1365, C1366		CEAT101M25
C1363, C1364		CEAT2R2M50
C1357, C1358		CEAT470M25
C1307–C1312		CEAT4R7M50
C1355, C1356		CKCYB331K50
C1313–C1318		CKCYF103Z50
C1361, C1362		CQMA242J50
C1359, C1360		CQMBA822J50

RESISTORS

No.	Description	Part No.
All Resistors		RD1/4PU□□□J

OTHERS

No.	Description	Part No.
CN1351	18P PLUG	KM200TA18
CN1352	4P PLUG	KM200TA4
CN1301	8P PLUG	KM200TA8
CN1302	10P SOCKET	KP200TA10L
CN1353	20P SOCKET	KP200TA20L

D MAIN CONTROL ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC115		NJM4558LD
	IC103, IC105		NJM4558MD
	IC901		PD5506A
	IC104, IC107		TC9163AF
	IC101		TC9274N-001
	IC108		TC9482N
	IC112		UPC4570G2
	IC113, IC114		UPC4570HA
	Q991		2SC1740S
	Q251, Q252, Q992		2SC2412K
	Q271, Q272		2SC2878
	Q902–Q905		DTA124EK
	Q901		DTC143EK
	Q107–Q112		HN1C03F
	D251, D252, D254, D255		1SS355
	D901–D910, D991		1SS355
	D995		UDZ11B
	D253, D256		UDZS5.1B

COILS AND FILTERS

Mark	No.	Description	Part No.
	L901	CHIP COIL	LCTA2R2J3225

CAPACITORS

Mark	No.	Description	Part No.
	C902		ACH7058
	C155, C156, C165, C166		CCSQCH101J50
	C175, C176, C951–C959		CCSQCH101J50
	C962–C964		CCSQCH101J50
	C101–C106, C183–C188		CCSQCH221J50
	C113, C114		CCSQCH331J50
	C157, C158, C167, C168, C177		CCSQCH560J50
	C111, C112, C117, C118		CEAT100M50
	C127–C130, C153, C154		CEAT100M50
	C159, C160, C163, C164		CEAT100M50
	C169, C170, C173, C174		CEAT100M50
	C179, C180, C252, C255, C256		CEAT100M50
	C277, C278		CEAT100M50
	C123–C126, C991		CEAT101M16
	C257		CEAT1R0M50
	C903		CEAT221M10
	C121, C122		CEAT221M16
	C905		CEAT2R2M50
	C915		CEAT331M10
	C107, C108, C115, C116		CKSQYB103K50
	C131–C140, C161, C162		CKSQYB103K50
	C253, C254, C279, C280, C901		CKSQYB103K50
	C904, C908, C909, C914, C919		CKSQYB103K50
	C965, C995		CKSQYB103K50
	C273, C274		CKSQYB104K25
	C275, C276		CKSQYB332K50
	C178		CKSQYB333K50
	C271, C272		CKSQYB472K50
	C910, C912		CKSQYB473K50
	C906		CKSQYF105Z16
	C992		CKSQYF225Z16

RESISTORS

Mark	No.	Description	Part No.
	R948		RA12T473J
	R913		RA5T103J
	R949		RA8T103J
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN903	7P FFC CONNECTOR	52044-0745
	CN902	13P FFC CONNECTOR	52044-1345
	CN906	5P FFC CONNECTOR	52045-0545
	CN105	23P FFC CONNECTOR	52045-2345
	CN905	26P FFC CONNECTOR	52045-2645
	CN904	32P FFC CONNECTOR	52045-3245
	CN941	4P PIN JACK	AKB7015
	113	6P PIN JACK	AKB7089
	JA911	2P PIN JACK	DKB1045
	CN103	10P PLUG	KM200TA10
	CN101	20P PLUG	KM200TA20
	CN104	16P SOCKET	KP200IA16L
	CN901	15P SOCKET	KP200TA15L
	CN920	7P SOCKET	KP200TA7L
	CN108	9P SOCKET	KP200TA9L
	909, 912, 913	PCB BINDER	VEF1040
	X901	CERAMIC RESONATOR (4.19MHz)	ASS1018

E V-AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC581		BU4052BCF
	IC7502, IC7522, IC7542, IC7602		NJM4558MD
	IC7622		NJM4558MD
	IC7501, IC7521, IC7541, IC7601		UPC4570G2
	IC7621		UPC4570G2
	Q503, Q523, Q543, Q603, Q623		2SA1048
	Q506, Q509, Q526, Q529, Q546		2SA970
	Q549, Q606, Q609, Q626, Q629		2SA970
	Q507, Q508, Q527, Q528		2SC2240
	Q547, Q548, Q561, Q607, Q608		2SC2240
	Q627, Q628		2SC2240
	Q510, Q530, Q550, Q610, Q630		2SC2878
	Q7501, Q7521, Q7541, Q7601, Q7621		2SC2878
	Q501, Q521, Q541, Q601, Q621		FMS3
	Q504, Q524, Q544, Q604, Q624		FMW4
	D501, D502, D504, D505		1SS355
	D521, D522, D524, D525		1SS355
	D541, D542, D544, D545		1SS355
	D581–D588, D601, D602		1SS355
	D604, D605, D621, D622		1SS355
	D624, D625, D7501, D7502		1SS355
	D7521, D7522, D7541, D7542		1SS355
	D7601, D7602, D7621, D7622		1SS355
	D7503, D7504, D7523, D7524		HZU2CLL
	D7543, D7544, D7603, D7604		HZU2CLL
	D7623, D7624		HZU2CLL
	D503, D523, D543, D603, D623		UDZS6.8B
	D506, D526, D546, D606, D626		UDZS8.2B

CAPACITORS

Mark	No.	Description	Part No.
	C511, C512, C531, C532		CCCSL181K2H
	C551, C552, C611, C612		CCCSL181K2H
	C631, C632		CCCSL181K2H
	C509, C529, C549, C609, C629		CCCSL5R0C2H
	C504, C524, C544, C604, C624		CCSQCH101J50
	C7504, C7505, C7524, C7525		CCSQCH220J50
	C7544, C7545, C7604, C7605		CCSQCH220J50
	C7624, C7625		CCSQCH220J50
	C502, C522, C542, C602, C622		CCSQCH221J50
	C506, C507, C526, C527		CCSQSL560J50

Mark	No.	Description	Part No.
	C546, C547, C606, C607		CCSQSL560J50
	C626, C627		CCSQSL560J50
	C7501, C7521, C7541, C7601, C7621		CEAT100M50
	C505, C508, C525, C528, C545		CEAT101M16
	C548, C605, C608, C625, C628		CEAT101M16
	C510, C530, C550, C610, C630		CEAT470M16
	C513, C533, C553, C568, C569		CEAT470M50
	C613, C633		CEAT470M50
	C501, C521, C541, C601, C621		CEAT4R7M50
	C7506, C7526, C7546, C7606, C7626		CEAT4R7M50
	C7502, C7503, C7510, C7512		CKSQYB104K25
	C7522, C7523, C7530, C7532		CKSQYB104K25
	C7542, C7543, C7550, C7552		CKSQYB104K25
	C7602, C7603, C7610, C7612		CKSQYB104K25
	C7622, C7623, C7630, C7632		CKSQYB104K25
	C561–C565		CKSQYB222K50
	C503, C523, C543, C603, C623		CKSQYB332K50
	C570		CKSQYF223Z50
	C581, C582		CKSQYF225Z16

RESISTORS

	R518, R538, R558, R618, R638		RD1/4MUF473J
⚠	R513, R514, R533, R534		RS1/10S121J
⚠	R553, R554, R613, R614		RS1/10S121J
⚠	R633, R634		RS1/10S121J
	Other Resistors		RS1/10S□□□J

OTHERS

	CN501	23P FFC CONNECTOR	52045-2345
	CN502	28P FFC CONNECTOR	52045-2845
	CN504	3P PLUG	KM250MA3
	506	PCB BINDER	VEF1040

F C-AMP-N ASSY

SEMICONDUCTORS

	Q2503, Q2523, Q2543, Q2603, Q2623		2SA970
	Q2001, Q2002		2SC1740S
	Q2502, Q2522, Q2542, Q2602, Q2622		2SC4137
⚠	Q2501, Q2521, Q2541, Q2601, Q2621		IRF540A
	D2501–D2504, D2521–D2524		1SS133
	D2541–D2544, D2601–D2604		1SS133
	D2621–D2624		1SS133

CAPACITORS

	C2501, C2521, C2541, C2601, C2621		CEANPR22M50
	C2001		CEAT101M10

RESISTORS

⚠	R2506, R2510, R2526, R2530, R2546		RD1/4PUF391J
⚠	R2550, R2606, R2610, R2626, R2630		RD1/4PUF391J
⚠	R2501, R2521, R2541, R2601, R2621		RD1/4PUF470J
	VR2501, VR2521, VR2541	(22Ω)	RCP1134
	VR2601, VR2621	(22Ω)	RCP1134
	Other Resistors		RD1/4PU□□□J

OTHERS

	CN2001	28P FFC CONNECTOR	52045-2845
	CN2501, CN2521, CN2541, CN2601	7P PLUG	KM250NA7L
	CN2621	8P PLUG	KM250NA8L

Mark	No.	Description	Part No.

G C-AMP-P ASSY

SEMICONDUCTORS

⚠	Q2504, Q2524, Q2544, Q2604, Q2624		IRF9540A

RESISTORS

⚠	R2511, R2531, R2551, R2611, R2631		RD1/4PUF470J

OTHERS

	CN2504, CN2524, CN2544	5P PLUG	KM250NA5L
	CN2604, CN2624	5P PLUG	KM250NA5L

HA OUTPUT-SL ASSY

RESISTORS

⚠	R2612	(0.05Ω/5W)	ACN7097

OTHERS

	CN2603	5P SOCKET	KP250NA5
	CN2602	7P SOCKET	KP250NA7

HB OUTPUT-FL ASSY

RESISTORS

⚠	R2512	(0.05Ω/5W)	ACN7097

OTHERS

	CN2503	5P SOCKET	KP250NA5
	CN2502	7P SOCKET	KP250NA7

HC OUTPUT-C ASSY

RESISTORS

⚠	R2552	(0.05Ω/5W)	ACN7097

OTHERS

	CN2543	5P SOCKET	KP250NA5
	CN2542	7P SOCKET	KP250NA7

HD OUTPUT-FR ASSY

RESISTORS

⚠	R2532	(0.05Ω/5W)	ACN7097

OTHERS

	CN2523	5P SOCKET	KP250NA5
	CN2522	7P SOCKET	KP250NA7

HE OUTPUT-SR ASSY

RESISTORS

⚠	R2632	(0.05Ω/5W)	ACN7097

OTHERS

	CN2623	5P SOCKET	KP250NA5
	CN2622	8P SOCKET	KP250NA8

Mark	No.	Description	Part No.

I VL-TERMINAL ASSY

CAPACITORS

	C2011, C2012		CEAT1R0M2A

OTHERS

	KN2011,KN2012	GROUND PLATE	ANK-142

J TRANS 2-1 ASSY

SEMICONDUCTORS

⚠	IC4501, IC4502 (2.5A)		AEK7014
	Q4502		2SA1837
	Q4501		2SC4793
	Q4504		DTA143ES
	Q4505		DTC124ES
	Q4503		DTC143ES
	D4509, D4510		MTZJ12B
	D4513		MTZJ16B
	D4505–D4508		MTZJ20A
	D4501–D4504, D4511, D4512		S5688G

CAPACITORS

	C4503 (1µF/100V, NP)		ACH1237
	C4507, C4508		CEAT471M63
	C4509, C4510		CECA101M50
	C4501, C4502		CQMA333K2E

RESISTORS

	R4509, R4510		RD1/4PMF332J
	R4501–R4503		RFA1/4PS220J
	Other Resistors		RD1/4PU□□□J

OTHERS

	4001	9P CABLE HOLDER	51048-0900
	H4501–H4504	FUSE CLIP	AKR1004
	4501, 4502	HEAT SINK	ANH-309
	4503, 4504	SCREW	BPZ30P080FZK

K DIODE ASSY

SEMICONDUCTORS

⚠	D3001, D3002		D5SBA20(B)

L SP/PS ASSY

SEMICONDUCTORS

	IC3001 (750mA)		AEK7007
	Q3504		2SC2235
	Q3503		2SC4793
	Q3005, Q3156–Q3159, Q3501		DTA124ES
	Q3502		DTC124ES
	Q3151–Q3155		DTC143ES
	D3051–D3060		1SS133
	D3506, D3508		MTZJ12C
	D3505		MTZJ27D
	D3507		MTZJ5.1B
	D3501, D3502		S5688G

COILS AND FILTERS

	L3101–L3105	AF CHOKE COIL	ATH1053

Mark	No.	Description	Part No.

SWITCHES AND RELAYS

	RY3101-RY3105		ASR7014

CAPACITORS

	C3001, C3002 (22000µF/56V)		
	C3118		CEAT100M50
	C3502		CEAT1R0M50
	C3504		CEAT471M25
	C3501		CEAT471M35
	C3101–C3110		CFTYA224J50
	C3503		CKCYF103Z50
	C3111–C3117		CQMA332K2E

RESISTORS

	R3151–R3155		RD1/2PM331J
	R3503		RD1/4PU102J
	R3507		RD1/4PU103J
	R3504		RD1/4PU104J
	R3506		RD1/4PU222J
	R3501		RD1/4PU471J
	R3502		RD1/4PU473J
	R3133, R3134		RS1LMF471J
	R3106–R3110		RS1LMF4R7J
	R3131, R3132		RS2LMF331J
	R3505		RS3LMF221J
	Other Resistors		RD1/4PM□□□J

OTHERS

	3004	8P CABLE HOLDER	51048-0800
	3001	9P CABLE HOLDER	51048-0900
	CN3003	14P FFC CONNECTOR	52045-1445
	CN3101	8P SPEAKER TERMINAL	AKE7044
	CN3102	6P SPEAKER TERMINAL	AKE7045
	J3002	JUMPER WIRE 8P	D20PYY0825E
	J3001	JUMPER WIRE 9P	D20PYY0915E
	CN3001	4P PLUG	KM200TA4
	CN3002	3P PLUG	KM250MA3
	KN3001	EARTH METAL FITTING	VNF1084

M REGULATOR ASSY

SEMICONDUCTORS

⚠	IC5009, IC5010 (200mA)		AEK7023
⚠	IC5004, IC5008		NJM78M05FA
⚠	IC5003		NJM78M12FA
⚠	IC5001		NJM78M15FA
⚠	IC5005, IC5007		NJM78M56FA
⚠	IC5006		NJM79M05FA
⚠	IC5002		NJM79M15FA
	D5010		1SS133
⚠	D5009		D3SBA20(B)
	D5012–D5014		MTZJ10C
	D5011		MTZJ5.1B
⚠	D5001–D5008, D5015–D5017		S5688G

CAPACITORS

	C5015, C5017, C5019, C5021, C5023		CEAT101M10
	C5009, C5011, C5013, C5025		CEAT101M25
	C5024		CEAT101M50
	C5026		CEAT221M35
	C5027, C5028		CEAT221M50

Mark	No.	Description	Part No.
	C5001, C5003, C5006		CEAT222M25
	C5002, C5004		CEAT222M35
	C5005		CEAT332M25
	C5007		CEAT472M16
	C5008, C5010, C5012, C5014, C5016		CKCYF103Z50
	C5018, C5020, C5022		CKCYF103Z50

RESISTORS

	R5001–R5003		RD1/2PM620J

OTHERS

	5009	4P CABLE HOLDER	51048-0400
	CN5002	14P FFC CONNECTOR	52045-1445
	CN5001	8P JUMPER CONNECTOR	52147-0810
	J5000	BOARD IN WIRE	DB022ND0
	CN5004	16P PLUG	KM200IA16
	CN5005	15P PLUG	KM200TA15
	CN5007	17P PLUG	KM200TA17
	CN5008	7P PLUG	KM200TA7
	CN5003,CN5006	9P PLUG	KM200TA9
	KN5001,KN5002	EARTH METAL FITTING	VNF1084

N TRANS 1 ASSY

TRANS 1 Assy has no service parts.

O TRANS 2-2 ASSY

SEMICONDUCTORS

⚠	IC5501	(4A)	AEK7018

CAPACITORS

⚠	C5502	(1µF/100V)	ACH1237
⚠	C5501		CEANPR47M50

RESISTORS

⚠	R5501		RFA1/4PS100J
	Other Resistors		RD1/4PU□□□J

OTHERS

	5501	4P CABLE HOLDER	51048-0400

P VIDEO ASSY

SEMICONDUCTORS

	IC751		BU4053BCF
	IC752		LC74782M-9011
	IC701		NJM2296M
	Q701		2SA933S
	Q751–Q754		2SC1740S
	Q755		DTC124EK
	D701, D702, D751–D753		1SS355

COILS AND FILTERS

	L752, L753	CHIP COIL	LCTA100J3225
	L751	CHIP COIL	LCTA330J3225

CAPACITORS

	C753		CCSQCH100D50
	C763, C772		CCSQCH101J50
	C715, C759		CCSQCH150J50
	C760		CCSQCH180J50
	C705–C707		CCSQCH181J50

Mark	No.	Description	Part No.
	C761, C762		CCSQCH240J50
	C754		CEAT100M50
	C701–C704, C710–C712		CEAT101M10
	C734, C735, C755, C764, C765		CEAT101M10
	C781–C784		CEAT101M10
	C713, C768, C769		CEAT101M16
	C757		CEAT1R0M50
	C752		CEAT330M16
	C795, C797		CKSQYB103K50
	C756		CKSQYB122K50
	C708, C709, C714, C766, C767		CKSQYB473K50
	C770, C771, C785, C786, C793		CKSQYB473K50

RESISTORS

	R715		RD1/2VM201J
	Other Resistors		RS1/10S□□□J

OTHERS

	CN702	21P FFC CONNECTOR	52045-2145
	CN701	26P FFC CONNECTOR	52045-2645
	702, 705, 706	2P RCA PIN JACK	AKB7017
	707	1P RCA PIN JACK	AKB7020
	704	PCB BINDER	VEF1040
	X751	CRYSTAL RESONATOR (14.31818MHz)	ASS1056

Q S-VIDEO ASSY

SEMICONDUCTORS

	IC831		BU4051BCF
	IC852		BU4053BCF
	IC851		LA7213
	IC801, IC802		NJM2296M
	Q852, Q853		2SA933S
	Q851		DTC124ES
	Q833, Q834		IMH11
	Q831		IMZ1A
	D801, D802, D804, D805, D851		1SS355

CAPACITORS

	C857		CCSQCH100D50
	C854		CCSQCH151J50
	C815–C818, C861, C862		CCSQCH181J50
	C898		CCSQCH221J50
	C809, C858		CCSQCH330J50
	C801, C803, C805, C807		CEAT101M10
	C819–C822, C852, C853, C863		CEAT101M10
	C881, C882		CEAT101M10
	C866, C868		CEAT101M16
	C851		CEAT3R3M50
	C831–C836, C855, C856, C891		CKSQYB103K50
	C893, C894, C899		CKSQYB103K50
	C810–C814, C859, C860		CKSQYB104K25
	C864, C865		CKSQYB104K25
	C802, C804, C806, C808		CKSQYB473K50
	C823–C826, C867, C869		CKSQYB473K50

RESISTORS

	R864		RD1/2VM201J
	R859		RD1/4VM471J
	Other Resistors		RS1/10S□□□J

Mark	No.	Description	Part No.

OTHERS

	CN804	21P FFC CONNECTOR	52045-2145
	CN802, CN803	4P MINI DIN SOCKET	AKP7020
	CN801	4P MINI DIN SOCKET	AKP7043
	JA881, JA882	REMOTE CONTROL JACK	RKN1004
	801	PCB BINDER	VEF1040

R H. PHONE/F. VIDEO ASSY

SEMICONDUCTORS

	Q7201, Q7202		2SC1740S

CAPACITORS

	C7201, C7202, C7215, C7216		CCSQCH271J50
	C7203, C7204		CCSQCH330J50
	C7208, C7209		CEAT101M10
	C7207		CEAT470M35
	C7210, C7212		CKSQYB103K50
	C7211		CKSQYB104K25
	C7213, C7214		CKSQYB105K10
	C7217, C7218		CKSQYB392K50

RESISTORS

	All Resistors		RS1/10S□□□J

OTHERS

	CN7201	12P FFC CONNECTOR	52045-1245
	CN7202	FRONT PIN JACK 4P	AKX7007
	JA7201	HEADPHONE JACK	RKB1014
	KN7201	EARTH METAL FITTING	VNF1084

S DISPLAY ASSY

SEMICONDUCTORS

	IC7401		BU1923
	IC7001		PD5507B
	Q7051		2SA1037K
	Q7401		2SA1993
	Q7403		2SC1740S
	Q7005		2SC2412K
	Q7001, Q7002, Q7052		DTC124EK
	Q7402		DTC143ES
	D7007–D7010, D7051–D7053		1SS355
	D7001, D7002		SLR-343VR(MNP)

COILS AND FILTERS

	L7011, L7012		LCTA330J3225
	L7001, L7401		LFA2R2J

SWITCHES AND RELAYS

	S7001–S7030		VSG1009

CAPACITORS

	C7010	(0.047µF/5.5V)	ACH7132
	C7007		CCSQCH101J50
	C7406, C7407		CCSQCH270J50
	C7008, C7013		CEAL101M6R3
	C7701, C7702		CEAT100M50
	C7405		CEAT101M10
	C7052, C7410		CEAT101M6R3
	C7409		CEAT1R0M50
	C7402		CEAT2R2M50
	C7001–C7005, C7091, C7403, C7404		CKSQYB102K50

Mark	No.	Description	Part No.
	C7051		CKSQYB103K50
	C7401		CKSQYB472K50
	C7009		CKSQYB473K50
	C7408		CKSQYB561K50

RESISTORS

	R7044		RA15T104J
	Other Resistors		RS1/10S□□□J

OTHERS

	7001	3P CABLE HOLDER	51052-0300
	7002, 7003	8P CABLE HOLDER	51052-0800
	CN7005	5P FFC CONNECTOR	52045-0545
	CN7002	6P FFC CONNECTOR	52045-0645
	CN7004	12P FFC CONNECTOR	52045-1245
	CN7001	32P FFC CONNECTOR	52045-3245
	V7001	FL TUBE	AAV7063
	X7401	CRYSTAL RESONATOR (4.332MHz)	ASS7004
	X7001	CERAMIC RESONATOR (7.2MHz)	ASS7018
	7004	REMOTE RECEIVER UNIT	GP1U28X

T ROTARY ENCODER ASSY

SWITCHES AND RELAYS

	S7101		ASX7004
	S7102		ASX7031

CAPACITORS

	C7101–C7104		CKSQYB103K50

RESISTORS

	All Resistors		RS1/10S□□□J

OTHERS

	CN7101	6P FFC CONNECTOR	52044-0645

U P-SW ASSY

SWITCHES AND RELAYS

	S6801		ASG1035

CAPACITORS

	C6801, C6802		CGCYX103K25

OTHERS

	CN6801		52151-0310

V PRIMARY ASSY

(1) CONTRAST TABLE

AWX7345 and AWX7454 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7345	AWX7454	
	Y6003 BOARD IN	ADX7321	Not used	
	Y6004 BOARD IN	ADX7320	Not used	
	Y6005 BOARD IN	ADX7319	Not used	

(2) PARTS LIST FOR AWX7345

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC6001		NJM78M56FA
	Q6001		DTC143ES
	D6005–D6007		1SS133
	D6008		MTZJ5.1A
⚠	D6001–D6004		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
⚠	L6001	LINE FILTER	ATF1006
⚠	L6003, L6004		ATX1012

TRANSFORMERS

Mark	No.	Description	Part No.
⚠	T6001	STANDBY TRANS.	ATT7040

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
⚠	RY6001	POWER RELAY	ASR1044

CAPACITORS

Mark	No.	Description	Part No.
⚠	C6002, C6003 (10000pF/AC250V)		ACG7020
	C6005		CEAT102M16
	C6006		CEAT470M25
	C6004		CKCYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R6003		RD1/2PM270J
	Other Resistors		RD1/4PU□□□J

OTHERS

Mark	No.	Description	Part No.
	6001	3P CABLE HOLDER	51048-0300
	Y6005	AWG18 BOARD IN	ADX7319
	Y6004	AWG18 BOARD IN	ADX7320
	Y6003	AWG18 BOARD IN	ADX7321
	H6001, H6002	FUSE CLIP	AKR1004
	J6000	3P JUMPER WIRE	D20PYY0335E
	CN6003	4P SOCKET	KP200TA4L
⚠	CN6002	AC CORD SOCKET	RKP1751
	6005, 6006	PCB BINDER	VEF1040
	6002, 6003	SCREW TERMINAL	VNE1948

W DIGITAL-I/O ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1201		TC74HCU04AF

COILS AND FILTERS

Mark	No.	Description	Part No.
	F1203–F1206	CHIP BEAD	DTF1064

CAPACITORS

Mark	No.	Description	Part No.
	C1204, C1211		CCSQCH470J50
	C1206, C1213		CEAT470M10
	C1203, C1210		CKSQYB103K50
	C1207, C1212, C1215, C1216		CKSQYF104Z25
	C1236, C1237		CKSQYF104Z25

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN1201	11P FFC CONNECTOR	52045-1145
	JA1204	2P PIN JACK	AKB7095
	JA1201,JA1202	OPTICAL RECEIVE MOD.	GP1F37R1
	JA1203	OPTICAL LINK MOD.	GP1F38T2

X RF TERMINAL ASSY

CAPACITORS

Mark	No.	Description	Part No.
	C1251		CKSQYB473K50
	C1250		CKSQYF473Z50

RESISTORS

Mark	No.	Description	Part No.
	All Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN1250	3P PLUG	KM250MA3
	JA1250	1P PIN JACK (AU, BLK)	VKB1074
	1250	SCREW TERMINAL	VNE1948

Y DSP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC9203		CS5360-KS
	IC9101		CS8414-CS
	IC9201, IC9202		NJM2100M
	IC9041		NJM4558MD
	IC9401, IC9411, IC9421		PCM1716E
	IC9501		PD5503A
	IC9374		PDK042A
	IC9071		PM4007A
	IC9391		PQ20WZ51
	IC9091		SRM2B256SLMX70
	IC9372		TC55V1664BFT-12
	IC9371		TC55V8128BJ-12
	IC9151		TC74ACT151F
	IC9102		TC74VHC157FT
	IC9103		TC7SH08FU
	IC9311		TC7WT241FU
	IC9204, IC9361		TC7WU04FU
	IC9601		TC9164AF
	IC9602–IC9604, IC9701–IC9705		UPC4570G2
	IC9321		XCD56362PV100
	Q9007		2PB709A
	Q9003, Q9032		2PD601A
	Q9001, Q9002, Q9004–Q9006, Q9031		2SC3082K
	Q9201, Q9202, Q9601–Q9606		2SC3326
	Q9102, Q9104, Q9203, Q9607		DTA124EK
	Q9609, Q9610		DTA124EK
	Q9101, Q9103, Q9204, Q9205, Q9608		DTC124EK
	D9601, D9602		1SS181
	D9201–D9204		1SS226
	D9002		1SS355
	D9001		KV1851

COILS AND FILTERS

Mark	No.	Description	Part No.
	F9001	BPF	ATF7001
	L9003	INDUCTOR	ATH7001
	L9071, L9104, L9321, L9323, L9391		ATL7002
	L9399, L9402–L9408, L9501, L9801		ATL7002
	L9807, L9809		ATL7002
		CHIP FERRITE BEAD	
	F9072	CHIP BEAD	DTF1064
	L9091, L9092, L9101, L9102		QTL1013
	L9105–L9108, L9151, L9152		QTL1013
	L9203–L9206, L9311, L9361		QTL1013
	L9371, L9372, L9374, L9396–L9398		QTL1013
		CHIP SOLID INDUCTOR	

CAPACITORS

Mark	No.	Description	Part No.
	C9329, C9349, C9355, C9357, C9358		CCSQCH101J50
	C9378, C9386		CCSQCH101J50
	C9232, C9453–C9455, C9742, C9809		CCSQCH221J50
	C9815, C9816		CCSQCH221J50
	C9112, C9512		CCSQCH271J50
	C9224, C9225		CCSQCH330J50
	C9033, C9325, C9326, C9335, C9337		CCSRCH101J50
	C9339, C9341, C9345, C9347, C9374		CCSRCH101J50
	C9387, C9609, C9610, C9721, C9722		CCSRCH101J50
	C9735		CCSRCH101J50
	C9364		CCSRCH180J50
	C9363		CCSRCH220J50
	C9095, C9231, C9233, C9621, C9622		CCSRCH221J50
	C9743, C9744, C9761–C9766		CCSRCH221J50
	C9057, C9201, C9202		CCSRCH270J50
	C9076, C9104, C9106, C9154, C9214		CCSRCH271J50
	C9220, C9362, C9402, C9412, C9422		CCSRCH271J50
	C9629		CCSRCH271J50
	C9719, C9720, C9733		CCSRCH331J50
	C9741		CCSRCH470J50
	C9451, C9452, C9509, C9617, C9618		CCSRCH471J50
	C9639		CCSRCH471J50
	C9211, C9717, C9718, C9731, C9808		CCSRCH561J25
	C9007		CCSRCH750J50
	C9707, C9708		CCSRCH820J50
	C9611, C9612		CCSRCH821J25
	C9312, C9643, C9644, C9756		CEJA100M25
	C9071, C9393, C9501, C9740, C9801		CEJA101M10
	C9442		CEJA221M10
	C9343, C9360		CEJA221M6R3
	C9216, C9219, C9222, C9403, C9405		CEJA330M10
	C9408, C9413, C9415, C9418, C9423		CEJA330M10
	C9425, C9428		CEJA330M10
	C9091, C9102, C9108, C9114, C9151		CEJA470M16
	C9372, C9376, C9383		CEJA470M16
	C9016, C9803, C9805		CEJA470M25
	C9406, C9409, C9416, C9419, C9426		CEJA470M6R3
	C9429		CEJA470M6R3
	C9206, C9207, C9391		CEJA4R7M50
	C9053		CEJANP4R7M25
	C9110		CEJAR47M50
	C9713, C9714, C9727, C9728, C9739		CEWAR330M10
	C9751–C9755		CEWAR330M10
	C9203, C9204, C9603, C9604		CEWAR4R7M50
	C9615, C9616, C9627, C9628		CEWAR4R7M50
	C9113, C9322, C9323, C9332, C9334		CKSQYB103K50
	C9342, C9344, C9350–C9354, C9377		CKSQYB103K50
	C9385, C9636		CKSQYB103K50
	C9330		CKSQYB474K16
	C9073, C9080, C9205, C9208, C9511		CKSQYF104Z25
	C9212, C9554		CKSRYB102K50
	C9014, C9054, C9056, C9070, C9103		CKSRYB103K50
	C9105, C9107, C9119, C9153, C9158		CKSRYB103K50
	C9221, C9313, C9324, C9327, C9333		CKSRYB103K50
	C9336, C9338, C9340, C9346, C9348		CKSRYB103K50
	C9361, C9373, C9388, C9401, C9411		CKSRYB103K50
	C9421, C9637		CKSRYB103K50
	C9626, C9730		CKSRYB104K16
	C9605, C9606, C9633		CKSRYB122K50
	C9703, C9704, C9715, C9716, C9729		CKSRYB182K50
	C9601, C9602, C9613, C9614, C9625		CKSRYB222K50
	C9701, C9702		CKSRYB272K50
	C9732		CKSRYB333K16
	C9645		CKSRYB472K50
	C9215, C9218, C9404, C9407, C9410		CKSRYB473K16
	C9414, C9417, C9420, C9424, C9427		CKSRYB473K16
	C9430		CKSRYB473K16
	C9359		CKSRYB562K50
	C9111		CKSRYB682K50
	C9020		CKSRYB683K16
	C9736		CKSRYB821K50
	C9002–C9006, C9008–C9013, C9015		CKSRYF104Z16
	C9017, C9018, C9031, C9032, C9043		CKSRYF104Z16
	C9051, C9052, C9055, C9058		CKSRYF104Z16
	C9074, C9075, C9077–C9079, C9081		CKSRYF104Z16
	C9092, C9209, C9210, C9607, C9608		CKSRYF104Z16
	C9619, C9620, C9631, C9632		CKSRYF104Z16
	C9709–C9712, C9723–C9726		CKSRYF104Z16
	C9737, C9738		CKSRYF104Z16
	C9041, C9042		CKSRYF105Z10

RESISTORS

Mark	No.	Description	Part No.
	R9158, R9351, R9376–R9379, R9394		RS1/10S0R0J
	R9401, R9411, R9421, R9452–R9454		RS1/10S0R0J
	R9104		RS1/10S101J
	R9114, R9239, R9504, R9505		RS1/10S102J
	R9214		RS1/10S103J
	R9393		RS1/10S2001F
	R9074, R9128		RS1/10S221J
	R9120		RS1/10S331J
	R9061		RS1/10S471J
	R9360		RS1/10S472J
	R9391		RS1/10S5100F
	Other Resistors		RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN9551	7P FFC CONNECTOR	52045-0745
	CN9803	11P FFC CONNECTOR	52045-1145
		PC BOARD DSP	ANP7311
	CN9804	3P PLUG	KM250MA3
	CN9801	17P SOCKET	KP200TA17L
	CN9802	9P SOCKET	KP200TA9L
	X9501	CERAMIC RESONATOR (7.70MHz)	ASS1055
	X9001	CRYSTAL RESONATOR (18.432MHz)	ASS7009
	X9361	CRYSTAL RESONATOR (20MHz)	ASS7023
	X9201	CRYSTAL RESONATOR (12.288MHz)	DSS1030

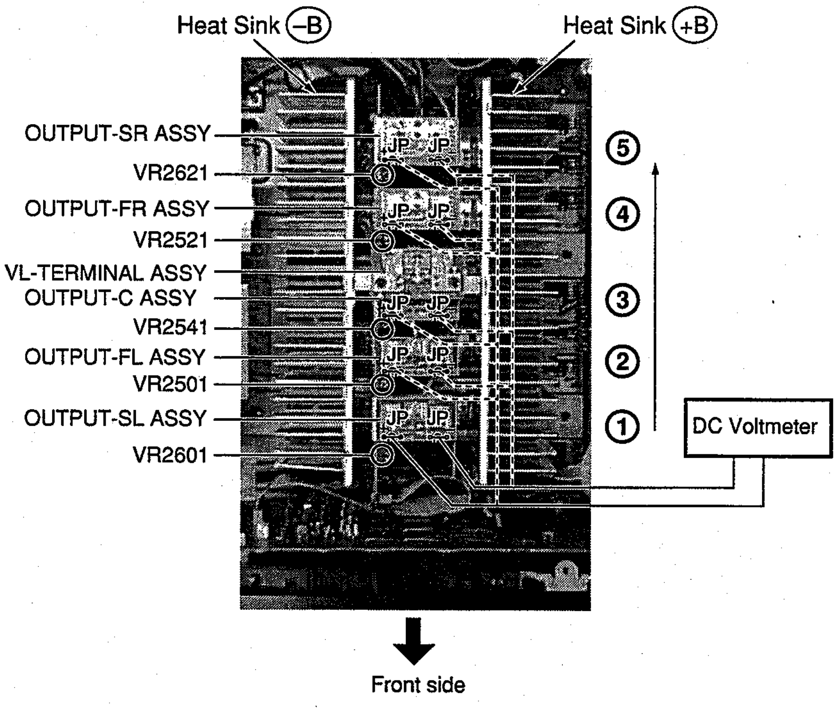
6. ADJUSTMENT

6.1 IDLE CURRENT ADJUSTMENT

- **CAUTION** : Heatsink's DC level is equal to +B or -B.
  Don't touch them or you will be electricary shocked.

1. Decrease the level of the Adjustment Variable resistors (VR) for the channel to be adjusted. (Turn counterclockwise.)
2. Set the power switch to ON.
3. Connect the DC voltmeter as shown below and adjust VRs in step No. order so that voltages become $16\text{mV}^{+4\text{mV}}_{-0\text{mV}}$.
4. Ages for seven minutes.
5. Readjust in step No. order so that the voltages become 11.5mV ± 1mV (10.5 to 12.5mV). Adjustment is completed.

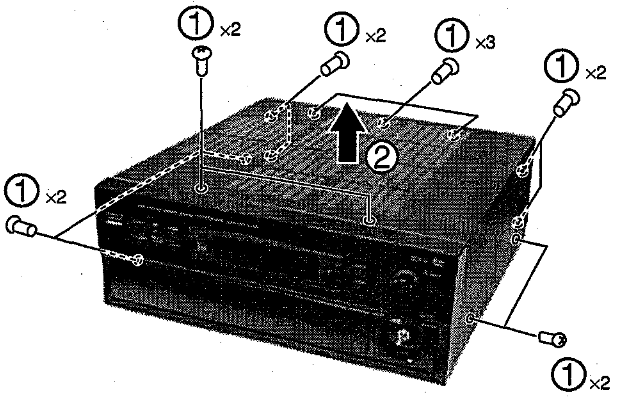
Step No.	Adjustment VR	Adjustment ch
1	VR2601	SL ch
2	VR2501	FL ch
3	VR2541	C ch
4	VR2521	FR ch
5	VR2621	SR ch

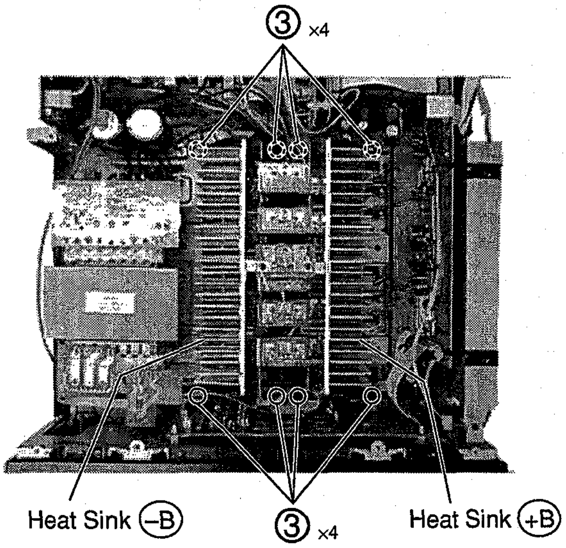

Heat Sink (-B)
Heat Sink (+B)
OUTPUT-SR ASSY
VR2621
OUTPUT-FR ASSY
VR2521
VL-TERMINAL ASSY
OUTPUT-C ASSY
VR2541
OUTPUT-FL ASSY
VR2501
OUTPUT-SL ASSY
VR2601
JP
⑤
④
③
②
①
DC Voltmeter
Front side

7. GENERAL INFORMATION

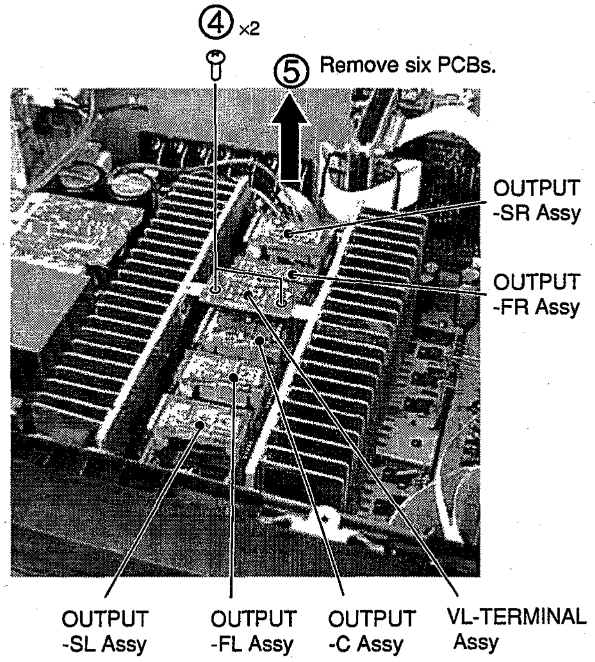
7.1 DISASSEMBLY

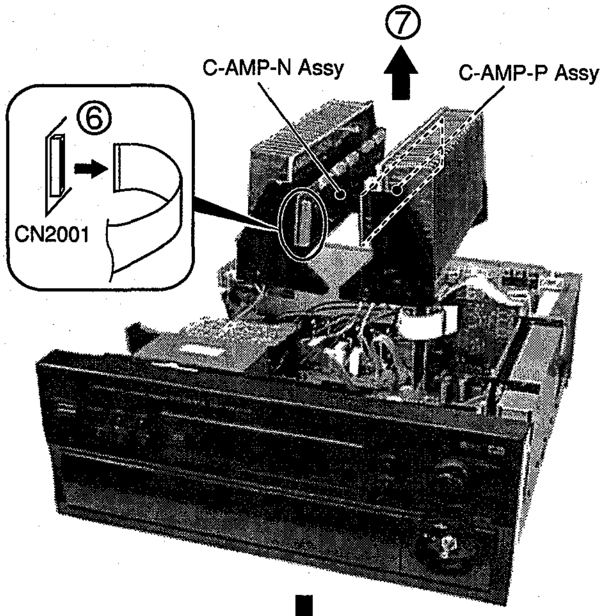
■ C-AMP-N and C-AMP-P ASSYS


① ×2
① ×2
① ×3
① ×2
②
① ×2
① ×2


③ ×4
Heat Sink ⊖B
③ ×4
Heat Sink ⊕B

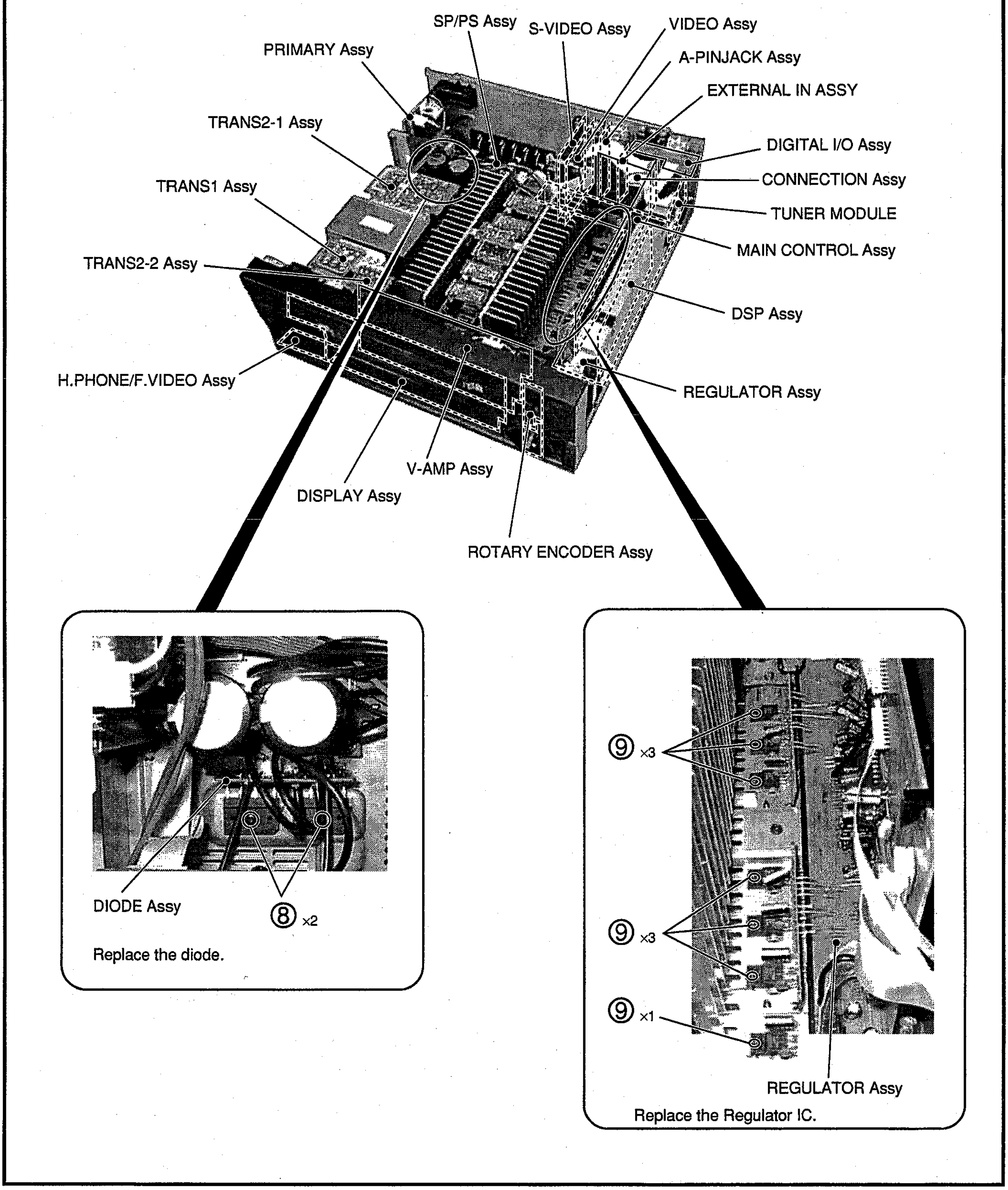
- **CAUTION** : Heatsink's DC level is equal to +B or - B. Don't touch them or you will be electricary shocked.


④ ×2
⑤ Remove six PCBs.
OUTPUT -SR Assy
OUTPUT -FR Assy
OUTPUT -SL Assy
OUTPUT -FL Assy
OUTPUT -C Assy
VL-TERMINAL Assy


⑦
C-AMP-N Assy
C-AMP-P Assy
⑥
CN2001

Replace the FETs on the C-AMP-N and C-AMP-P assemblies.

■ DIODE, REGULATOR and Other ASSYS


SP/PS Assy
S-VIDEO Assy
VIDEO Assy
PRIMARY Assy
A-PINJACK Assy
EXTERNAL IN ASSY
TRANS2-1 Assy
DIGITAL I/O Assy
CONNECTION Assy
TRANS1 Assy
TUNER MODULE
MAIN CONTROL Assy
TRANS2-2 Assy
DSP Assy
H.PHONE/F.VIDEO Assy
REGULATOR Assy
V-AMP Assy
DISPLAY Assy
ROTARY ENCODER Assy
DIODE Assy
⑧ ×2
⑨ ×3
⑨ ×3
⑨ ×1
REGULATOR Assy

Replace the diode.

Replace the Regulator IC.

7.2 PARTS

7.2.1 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

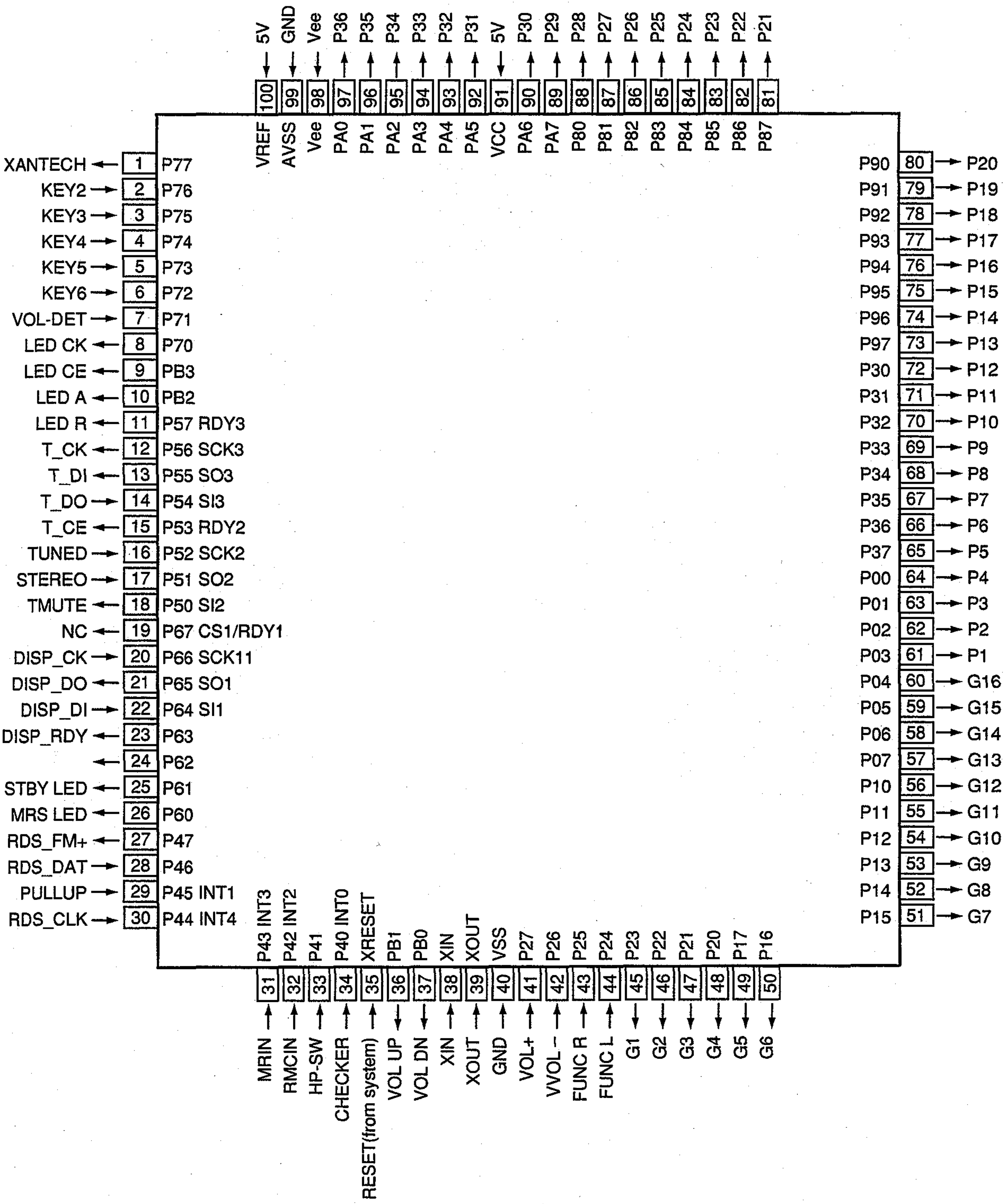
•List of IC

PD5507B, PD5506A

■ PD5507B (DISPLAY ASSY : IC7001)

- **Display Control IC**

- **Pin Assignment (Top View)**


5V 100 VREF
GND 99 AVSS
Vee 98 Vee
P36 97 PA0
P35 96 PA1
P34 95 PA2
P33 94 PA3
P32 93 PA4
P31 92 PA5
5V 91 VCC
P30 90 PA6
P29 89 PA7
P28 88 P80
P27 87 P81
P26 86 P82
P25 85 P83
P24 84 P84
P23 83 P85
P22 82 P86
P21 81 P87
XANTECH 1 P77
KEY2 2 P76
KEY3 3 P75
KEY4 4 P74
KEY5 5 P73
KEY6 6 P72
VOL-DET 7 P71
LED CK 8 P70
LED CE 9 PB3
LED A 10 PB2
LED R 11 P57 RDY3
T_CK 12 P56 SCK3
T_DI 13 P55 SO3
T_DO 14 P54 SI3
T_CE 15 P53 RDY2
TUNED 16 P52 SCK2
STEREO 17 P51 SO2
TMUTE 18 P50 SI2
NC 19 P67 CS1/RDY1
DISP_CK 20 P66 SCK11
DISP_DO 21 P65 SO1
DISP_DI 22 P64 SI1
DISP_RDY 23 P63
24 P62
STBY LED 25 P61
MRS LED 26 P60
RDS_FM+ 27 P47
RDS_DAT 28 P46
PULLUP 29 P45 INT1
RDS_CLK 30 P44 INT4
P90 80 P20
P91 79 P19
P92 78 P18
P93 77 P17
P94 76 P16
P95 75 P15
P96 74 P14
P97 73 P13
P30 72 P12
P31 71 P11
P32 70 P10
P33 69 P9
P34 68 P8
P35 67 P7
P36 66 P6
P37 65 P5
P00 64 P4
P01 63 P3
P02 62 P2
P03 61 P1
P04 60 G16
P05 59 G15
P06 58 G14
P07 57 G13
P10 56 G12
P11 55 G11
P12 54 G10
P13 53 G9
P14 52 G8
P15 51 G7
P43 INT3 31 MRIN
P42 INT2 32 RMCIN
P41 33 HP-SW
P40 INT0 34 CHECKER
XRESET 35 RESET(from system)
PB1 36 VOL UP
PB0 37 VOL DN
XIN 38 XIN
XOUT 39 XOUT
VSS 40 GND
P27 41 VOL+
P26 42 VVOL –
P25 43 FUNC R
P24 44 FUNC L
P23 45 G1
P22 46 G2
P21 47 G3
P20 48 G4
P17 49 G5
P16 50 G6

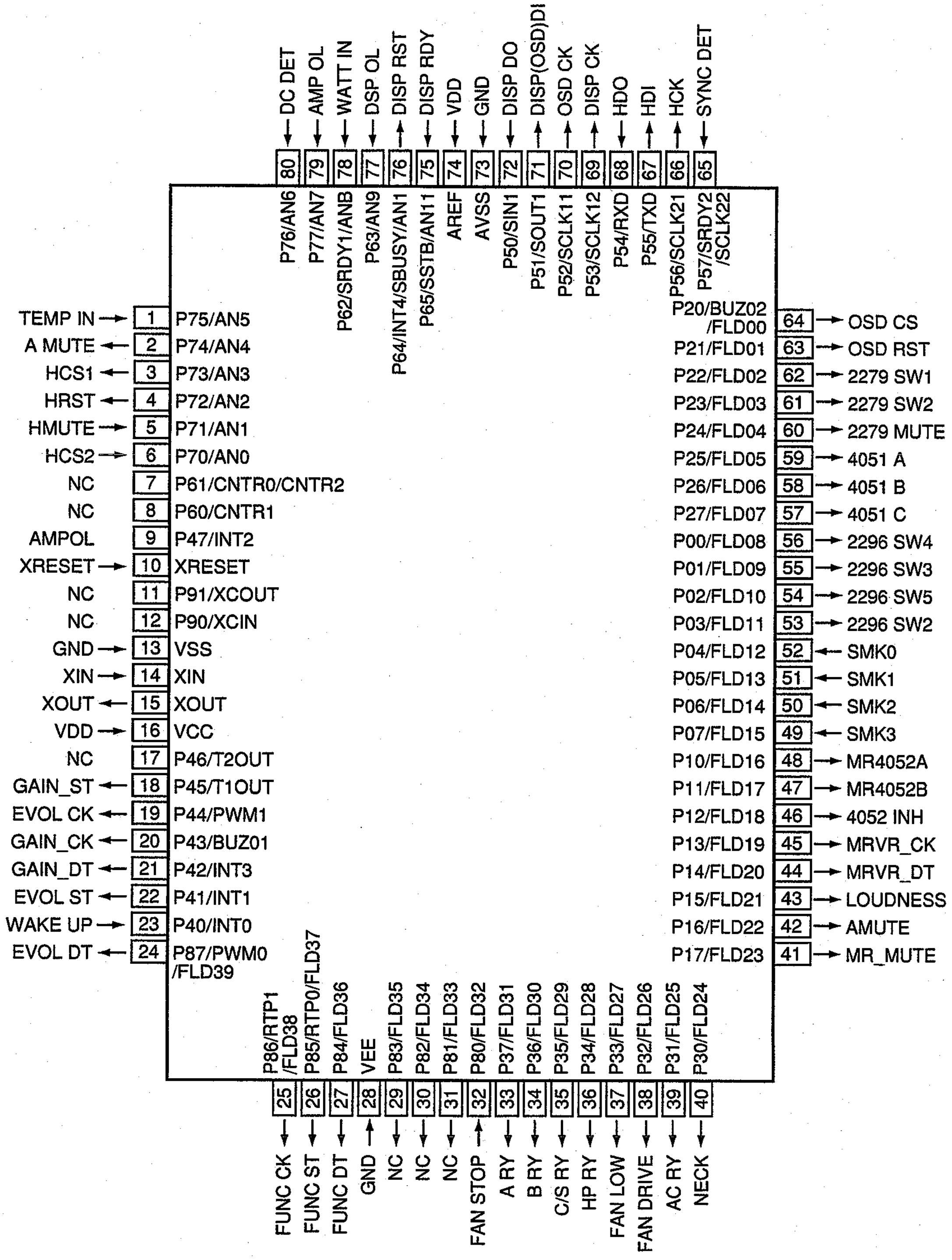
- **Pin Function**

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	XANTECH	O	XANTECH ON/OFF	51	G7	O	Grid output 7
2	KEY 2	I	Key scan input 2	52	G8	O	Grid output 8
3	KEY 3	I	Key scan input 3	53	G9	O	Grid output 9
4	KEY 4	I	Key scan input 4	54	G10	O	Grid output 10
5	KEY 5	I	Key scan input 5	55	G11	O	Grid output 11
6	KEY 6	I	Key scan input 6	56	G12	O	Grid output 12
7	VOL-DET	I	Detection of volume position	57	G13	O	Grid output 13
8	LED CKL	O	Clock for IC7071 M66311	58	G14	O	Grid output 14
9	LED OE	O	Output enable for IC7071 M66311	59	G15	O	Grid output 15
10	LED A	O	Data for IC7071 M66311	60	G16	O	Grid output 16
11	LED R	O	Reset for IC7071 M66311	61	S1	O	Segment output 1
12	T-CK	O	Clock for tuner module	62	S2	O	Segment output 2
13	T-DI	O	Data for tuner module	63	S3	O	Segment output 3
14	T-DO	I	Data from tuner module	64	S4	O	Segment output 4
15	T-CE	O	Chip enable for tuner module	65	S5	O	Segment output 5
16	TUNED	I	Tuned data from tuner module	66	S6	O	Segment output 6
17	STEREO	I	Stereo tuned data from tuner module	67	S7	O	Segment output 7
18	T-MUTE	O	Tuner mute ON/OFF	68	S8	O	Segment output 8
19	NC	O	Open	69	S9	O	Segment output 9
20	DISP CK	I	Clock from IC901 MAIN U-COM	70	S10	O	Segment output 10
21	DISP DO	O	Data for IC901 MAIN U-COM	71	S11	O	Segment output 11
22	DISP DI	I	Data from IC901 MAIN U-COM	72	S12	O	Segment output 12
23	DISP RDY	O	Data request for IC901 MAIN U-COM	73	S13	O	Segment output 13
24	NC	–	Open	74	S14	O	Segment output 14
25	STBY LED	O	Standby LED	75	S15	O	Segment output 15
26	MRS LED	O	Sub room LED (MR&S model), EON LED (RDS model)	76	S16	O	Segment output 16
27	RDS FM+	–	VDD for IC7401 BU1923 (RDS model only)	77	S17	O	Segment output 17
28	RDS DAT	O	Data for IC7401 BU1923 (RDS model only)	78	S18	O	Segment output 18
29	NC	I	(pull-up)	79	S19	O	Segment output 19
30	RDS CLK	I	Clock for IC7401 BU1923 (RDS model only)	80	S20	O	Segment output 20
31	MR IN	I	Sub room remote control (MR&S, MR model only)	81	S21	O	Segment output 21
32	RMC IN	I	Remote control	82	S22	O	Segment output 22
33	HP-SW	I	Headphone connect detect	83	S23	O	Segment output 23
34	NC	I	For unit check test mode detection	84	S24	O	Segment output 24
35	RESET	I	Reset	85	S25	O	Segment output 25
36	VOL/UP	O	Control for VOIL UP	86	S26	O	Segment output 26
37	VOL/DN	O	Control for VOL DOWN	87	S27	O	Segment output 27
38	XIN	–	Connect a 7.2MHz oscillator	88	S28	O	Segment output 28
39	XOUT	–		89	S29	O	Segment output 29
40	VSS	–	GND	90	S30	O	Segment output 30
41	VOL+	I	Rotary encoder signal +	91	VCC	–	Power supply +5V
42	VOL-	I	Rotary encoder signal -	92	S31	O	Segment output 31
43	FUNC/R	I	Rotary encoder signal R	93	S32	O	Segment output 32
44	FUNC/L	I	Rotary encoder signal L	94	S33	O	Segment output 33
45	G1	O	Grid output 1	95	S34	O	Segment output 34
46	G2	O	Grid output 2	96	S35	O	Segment output 35
47	G3	O	Grid output 3	97	S36	O	Segment output 36
48	G4	O	Grid output 4	98	VEE	–	Power supply 5V
49	G5	O	Grid output 5	99	AVSS	–	GND
50	G6	O	Grid output 6	100	VREF	–	Reference voltage 5V

■ PD5506A (MAIN CONTROL ASSY : IC901)

• Main Control IC

• Pin Assignment (Top View)


TEMP IN
1
P75/AN5
A MUTE
2
P74/AN4
HCS1
3
P73/AN3
HRST
4
P72/AN2
HMUTE
5
P71/AN1
HCS2
6
P70/AN0
NC
7
P61/CNTR0/CNTR2
NC
8
P60/CNTR1
AMPOL
9
P47/INT2
XRESET
10
XRESET
NC
11
P91/XCOUT
NC
12
P90/XCIN
GND
13
VSS
XIN
14
XIN
XOUT
15
XOUT
VDD
16
VCC
NC
17
P46/T2OUT
GAIN_ST
18
P45/T1OUT
EVOL CK
19
P44/PWM1
GAIN_CK
20
P43/BUZ01
GAIN_DT
21
P42/INT3
EVOL ST
22
P41/INT1
WAKE UP
23
P40/INT0
EVOL DT
24
P87/PWM0
/FLD39
P86/RTP1
/FLD38
25
FUNC CK
P85/RTP0/FLD37
26
FUNC ST
P84/FLD36
27
FUNC DT
VEE
28
GND
P83/FLD35
29
NC
P82/FLD34
30
NC
P81/FLD33
31
NC
P80/FLD32
32
FAN STOP
P37/FLD31
33
A RY
P36/FLD30
34
B RY
P35/FLD29
35
C/S RY
P34/FLD28
36
HP RY
P33/FLD27
37
FAN LOW
P32/FLD26
38
FAN DRIVE
P31/FLD25
39
AC RY
P30/FLD24
40
NECK
P17/FLD23
41
MR_MUTE
P16/FLD22
42
AMUTE
P15/FLD21
43
LOUDNESS
P14/FLD20
44
MRVR_DT
P13/FLD19
45
MRVR_CK
P12/FLD18
46
4052 INH
P11/FLD17
47
MR4052B
P10/FLD16
48
MR4052A
P07/FLD15
49
SMK3
P06/FLD14
50
SMK2
P05/FLD13
51
SMK1
P04/FLD12
52
SMK0
P03/FLD11
53
2296 SW2
P02/FLD10
54
2296 SW5
P01/FLD09
55
2296 SW3
P00/FLD08
56
2296 SW4
P27/FLD07
57
4051 C
P26/FLD06
58
4051 B
P25/FLD05
59
4051 A
P24/FLD04
60
2279 MUTE
P23/FLD03
61
2279 SW2
P22/FLD02
62
2279 SW1
P21/FLD01
63
OSD RST
P20/BUZ02
/FLD00
64
OSD CS
P57/SRDY2
/SCLK22
65
SYNC DET
P56/SCLK21
66
HCK
P55/TXD
67
HDI
P54/RXD
68
HDO
P53/SCLK12
69
DISP CK
P52/SCLK11
70
OSD CK
P51/SOUT1
71
DISP(OSD)DI
P50/SIN1
72
DISP DO
AVSS
73
GND
AREF
74
VDD
P65/SSTB/AN11
75
DISP RDY
P64/INT4/SBUSY/AN1
76
DISP RST
P63/AN9
77
DSP OL
P62/SRDY1/ANB
78
WATT IN
P77/AN7
79
AMP OL
P76/AN6
80
DC DET

• Pin Function

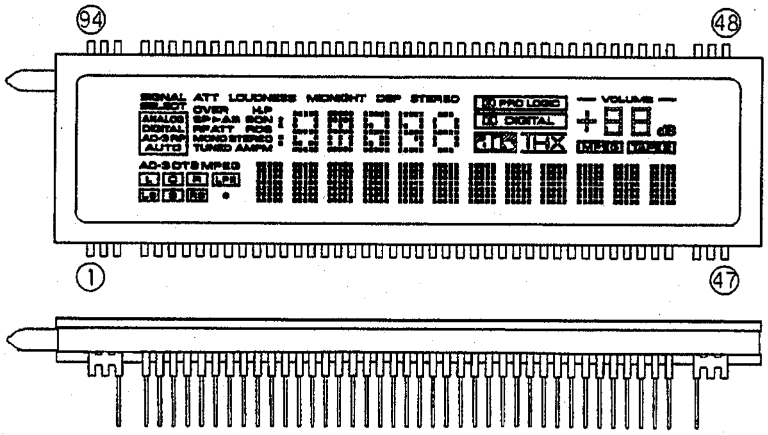
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	TEMP IN	I/O	O/open (KU,J,SD), I/Fan temperature A/D input (other)	41	MR MUTE	O	Audio mute ON/OFF for sub room (MR&S, MR model only)
2	A MUTE	O	Audio mute ON/OFF	42	A MUTE2	O	Audio preout mute ON/OFF
3	DSP CS1	O	Chip select for IC9501 DSP U-COM	43	LOUD	O	Loudness ON/OFF
4	DSP RST	O	Reset for IC9501 DSP U-COM	44	MR-V DT	O	Data for IC110 M62429FP control (MR&S model only)
5	DSP MUTE	I	Mute request from IC9501 DSP U-COM	45	MR-V CK	O	Clock for IC110 M62429FP control (MR&S model only)
6	DSP CS2	I	Chip select from IC9501 DSP U-COM	46	4052 INH	O	Inhibit for IC102 BU4052BCF control (MR&S model only)
7	NC	O	Open	47	4052 B	O	Control for IC102 BU4052BCF (MR&S model only)
8	NC	O	Open	48	4052 A		
9	AMPOL	I	Amp Overload detect	49	SIMUKE 3	I	SIMUKE (pull-up or down)
10	RESET	I	Reset	50	SIMUKE 2		
11	NC	O	Open	51	SIMUKE 1		
12	NC	O	Open	52	SIMUKE 0		
13	GND	–	GND	53	2296-2	O	Control for IC701, 801, 802 NJM2296M
14	XIN	I	Connect a 4.19MHz oscillator	54	2296-5		
15	XOUT	O		55	2296-3		
16	VDD	–	Power supply +5V	56	2296-4		
17	NC	O	Open	57	4051-C	O	Control for IC831 BU4051BCF
18	ST3	O	Strobe for IC107 TC9163F control	58	4051-B		
19	CK2	O	Clock for IC108 TC9482N control	59	4051-A		
20	CK3	O	Clock for IC107 TC9163F control	60	2279-M	O	Control for IC731 NJM2279M (MR&S model only)
21	DT3	O	Data for IC107 TC9163F control	61	2279-2		
22	ST2	O	Strobe for IC108 TC9482N control	62	2279-1		
23	W.UP	I	AC pulse input	63	OSD RST	O	Reset for IC752 LC74782M-9011
24	DT2	O	Data for IC108 TC9482N control	64	OSD CS	O	Chip select for IC752 LC74782M-9011
25	CK1	O	Clock for IC101 TC9274N and IC104 TC9163F control	65	SYNC DET	I	Detection of synchronizing signal
26	ST1	O	Strobe for IC101 TC9274N and IC104 TC9163F control	66	DSP HCK	O	Clock for IC9501 DSP U-COM
27	DT1	O	Data for IC101 TC9274N and IC104 TC9163F control	67	DSP HDI	O	Data for IC9501 DSP U-COM
28	GND	–	GND	68	DSP HDO	I	Data from IC9501 DSP U-COM
29	NC	O	Open	69	DISP CK	O	Clock for IC7001 DISP U-COM
30	NC	O	Open	70	OSD CK	O	Clock for IC752 LC74782M-9011
31	NC	O	Open	71	DISP DI	O	Data for IC7001 DISP U-COM
32	FAN STOP	I/O	O/Open (KU,J,SD), I/Fan stop detecter (other)	72	DISP DO	I	Data from IC7001 DISP U-COM
33	A RY	O	SP A relay ON/OFF	73	GND	–	GND
34	B RY	O	SP B relay ON/OFF	74	VDD	–	Power supply +5V
35	C/S RY	O	SP C/S relay ON/OFF	75	DISP RDY	I	Data request from IC7001 DISP U-COM
36	HP RY	O	Headphone relay ON/OFF	76	DISP RST	O	Reset for IC7001 DISP U-COM
37	FAN LOW	O	Open (KU,J,SD), Fan low (other)	77	DSP OL	I	DSP overload detect, A/D input
38	FAN DRIVE	O	Open (KU,J,SD), Fan drive (other)	78	WATT IN	I/O	O/Open (KU,J,SD), I/Fan wattage input, A/D input (other)
39	AC RY	O	AC relay ON/OFF	79	AMP OL	I	Amp overload detect, A/D input
40	NECK	O	Neck ON/OFF (24,26,908,938 only)	80	DC DET	I	Detection of amp power error, A/D input

7.2.2 DISPLAY

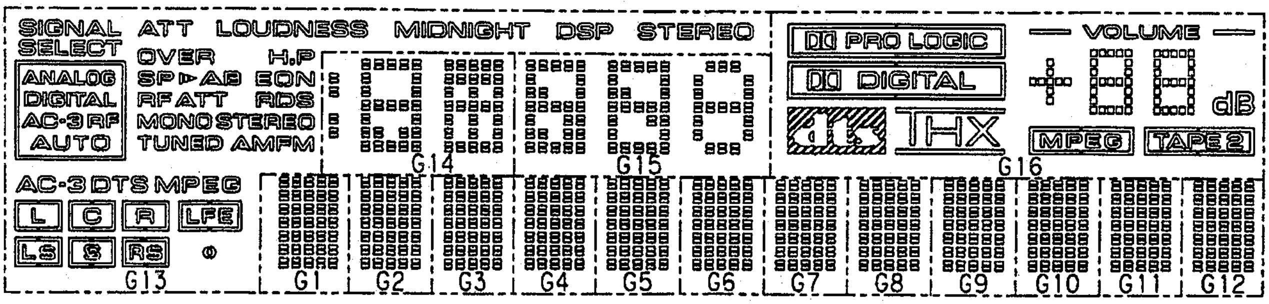
■ AAV7063 (DISPLAY ASSY :V7001)

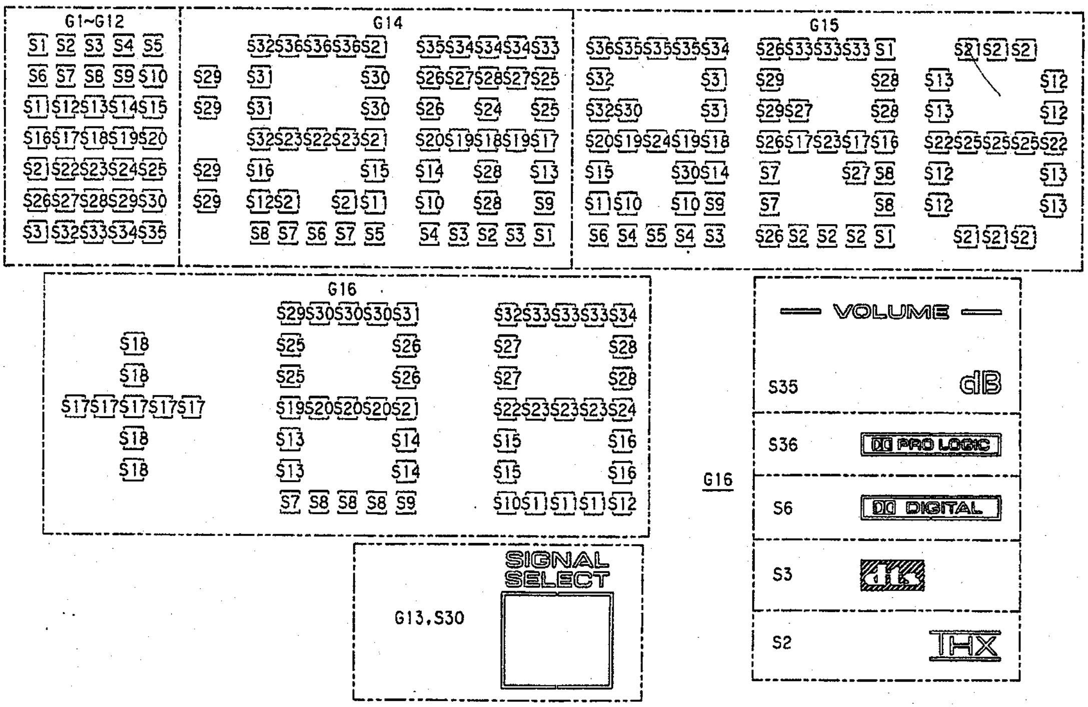
- FL Indicator Tube

• Pin Assignment



• Grid Assignment


SIGNAL SELECT
ATT
LOUDNESS
MIDNIGHT
DSP
STEREO
OVER
H.P
SP▷AB
EON
RF ATT
RDS
MONO STEREO
TUNED AM FM
ANALOG
DIGITAL
AC-3 RF
AUTO
PRO LOGIC
DIGITAL
VOLUME
dB
THX
MPEG
TAPE 2
AC-3 DTS MPEG
L
C
R
LFE
LS
S
RS
G13
G1
G2
G3
G4
G5
G6
G7
G8
G9
G10
G11
G12
G14
G15
G16


G1~G12
G14
G15
G16
VOLUME
S35
dB
S36
PRO LOGIC
S6
DIGITAL
S3
S2
THX
SIGNAL SELECT
G13,S30

- **Anode and Grid Connection**

	G1~G12	G13	G14	G15	G16
S1	S1		S1	S1	
S2	S2	FM	S2	S2	S2
S3	S3	AM	S3	S3	S3
S4	S4	MPEG	S4	S4	TAPE2
S5	S5	LFE	S5	S5	MPEG
S6	S6	STEREO	S6	S6	S6
S7	S7	TUNED	S7	S7	S7
S8	S8	MONO	S8	S8	S8
S9	S9	R	S9	S9	S9
S10	S10	C	S10	S10	S10
S11	S11	L	S11	S11	S11
S12	S12	RDS	S12	S12	S12
S13	S13	DTS	S13	S13	S13
S14	S14	AC-3 (DTS)	S14	S14	S14
S15	S15	RFATT	S15	S15	S15
S16	S16	EON	S16	S16	S16
S17	S17	(▷A)B	S17	S17	S17
S18	S18	(▷)A(B)	S18	S18	S18
S19	S19	◎	S19	S19	S19
S20	S20	Ls	S20	S20	S20
S21	S21	S	S21	S21	S21
S22	S22	Rs	S22	S22	S22
S23	S23	SP▷▷	S23	S23	S23
S24	S24	OVER	S24	S24	S24
S25	S25	H.P	S25	S25	S25
S26	S26	AUTO	S26	S26	S26
S27	S27	AC-3RF	S27	S27	S27
S28	S28	DIGITAL	S28	S28	S28
S29	S29	ANALOG	S29	S29	S29
S30	S30	S30	S30	S30	S30
S31	S31	ATT	S31	S31	S31
S32	S32	LOUDNESS	S32	S32	S32
S33	S33	MIDNIGHT	S33	S33	S33
S34	S34	DSP	S34	S34	S34
S35	S35	(DSP) STEREO	S35	S35	S35
S36			S36	S36	S36

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Assignment	NL	NL	F1	NP	D	IC	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL

Pin No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
Assignment	NL	NL	S36	S35	S34	S33	S32	S31	S30	S29	NL	NL	NL	S28	S27	S26	S25	S24	H	NP	F2	NL	NL

Pin No.	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
Assignment	NL	NL	NL	NP	S23	S22	S21	S20	S19	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4

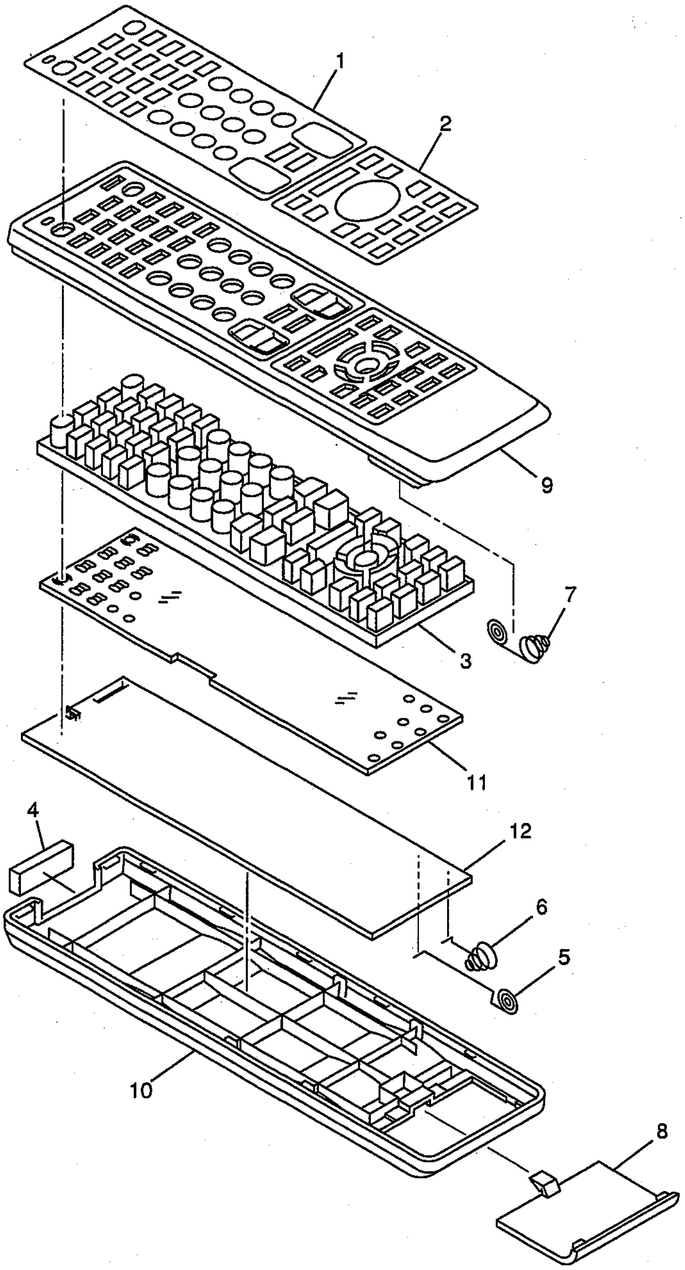
Pin No.	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
Assignment	S3	S2	S1	G16	G15	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1	NP	NL	NL	NL

F1, F2 : Filament G1 to G16 : Grid S1 to S36 : Anode D : External connect to F1 NP: No Pin NL : Lead
H : Power supply grid usually (ec level = Apply Typ 35.0 VDC) IC : Internal connection

7.3 REMOTE CONTROL UNIT [AXD7214 (CU-VSX162) and AXD7236 (CU-VSX165)]

7.3.1 EXPLODED VIEWS AND PARTS LIST

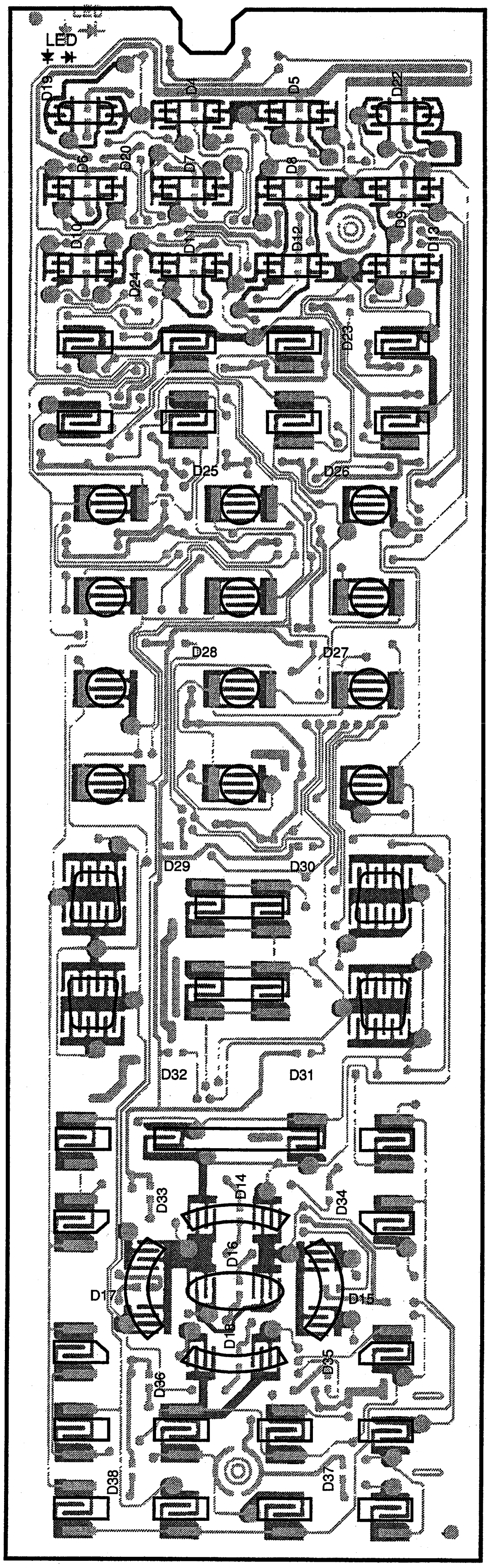
NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*



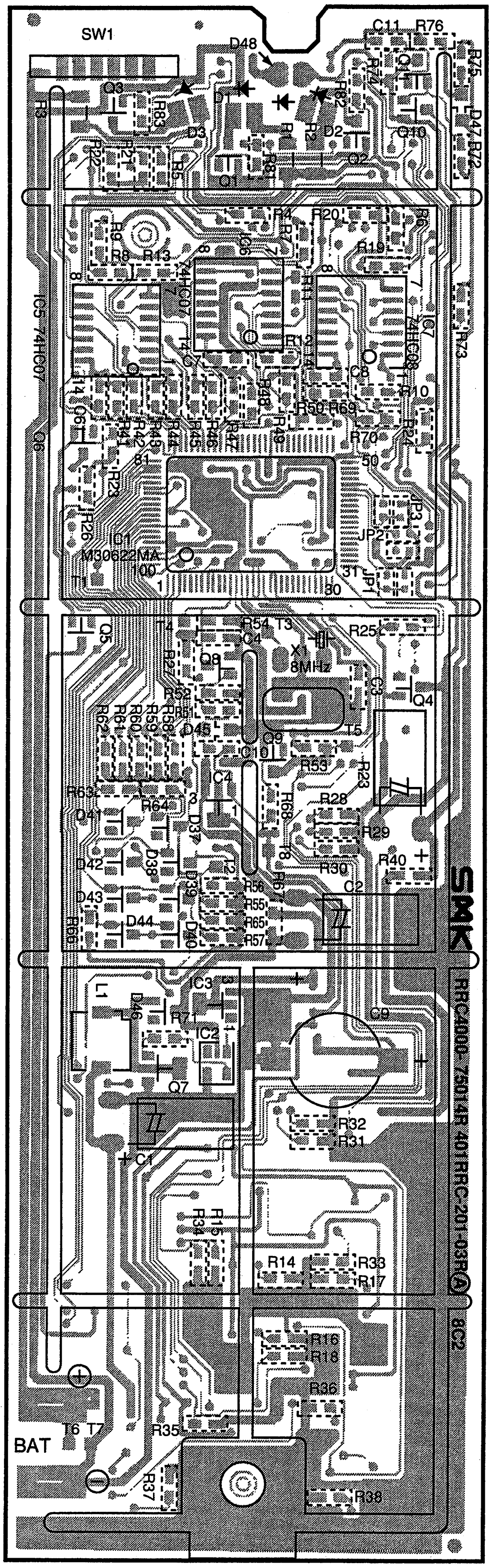
● PARTS LIST

Mark	No.	Description	Part No.
	1	Name Plate A (AXD7214)	AZA7356
	1	Name Plate A (AXD7236)	AZA7353
	2	Name Plate B (AXD7214)	AZA7376
	2	Name Plate B (AXD7236)	AZA7377
	3	Rubber Sheet	AZA7355
	4	Filter	AZA7340
	5	Terminal A (+)	AZB7141
	6	Terminal B (-)	AZB7142
	7	Spring	AZB7143
	8	Battery Cover (AXD7214)	AZN2401
	8	Battery Cover (AXD7236)	AZN7791
	9	Case (A) (AXD7214)	AZN7780
	9	Case (A) (AXD7236)	AZN7792
	10	Case (B) (AXD7214)	AZN7781
	10	Case (B) (AXD7236)	AZN7793
	11	Illumi Plate	AZN7782
NSP	12	PCB	AZW7254

7.3.2 PCB DIAGRAM

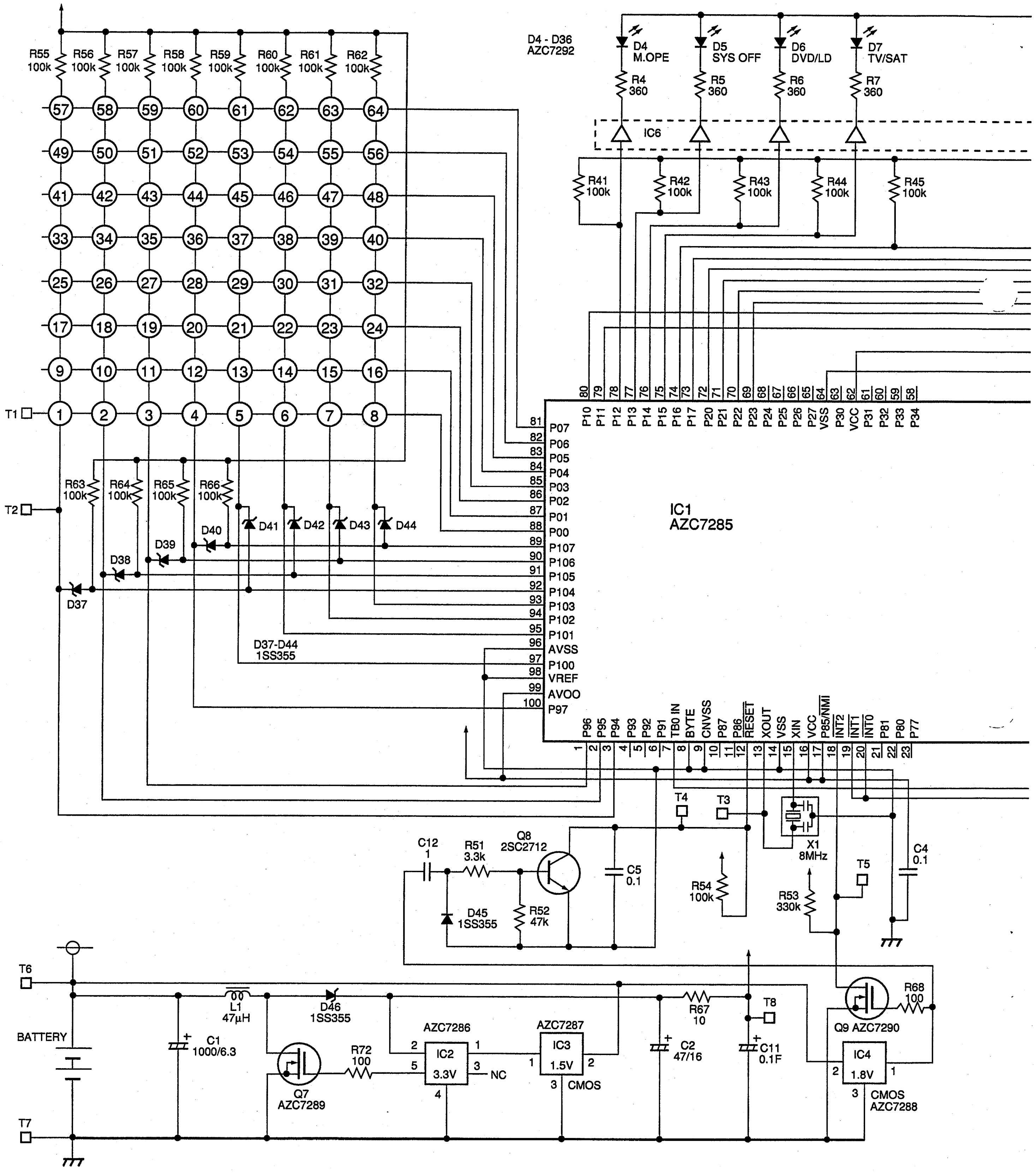

LED
D19
D4
D5
D22
D6
D20
D7
D8
D21
D10
D11
D12
D9
D13
D24
D23
D25
D26
D28
D27
D29
D30
D32
D31
D33
D14
D34
D16
D17
D15
D18
D36
D35
D38
D37

SIDE A

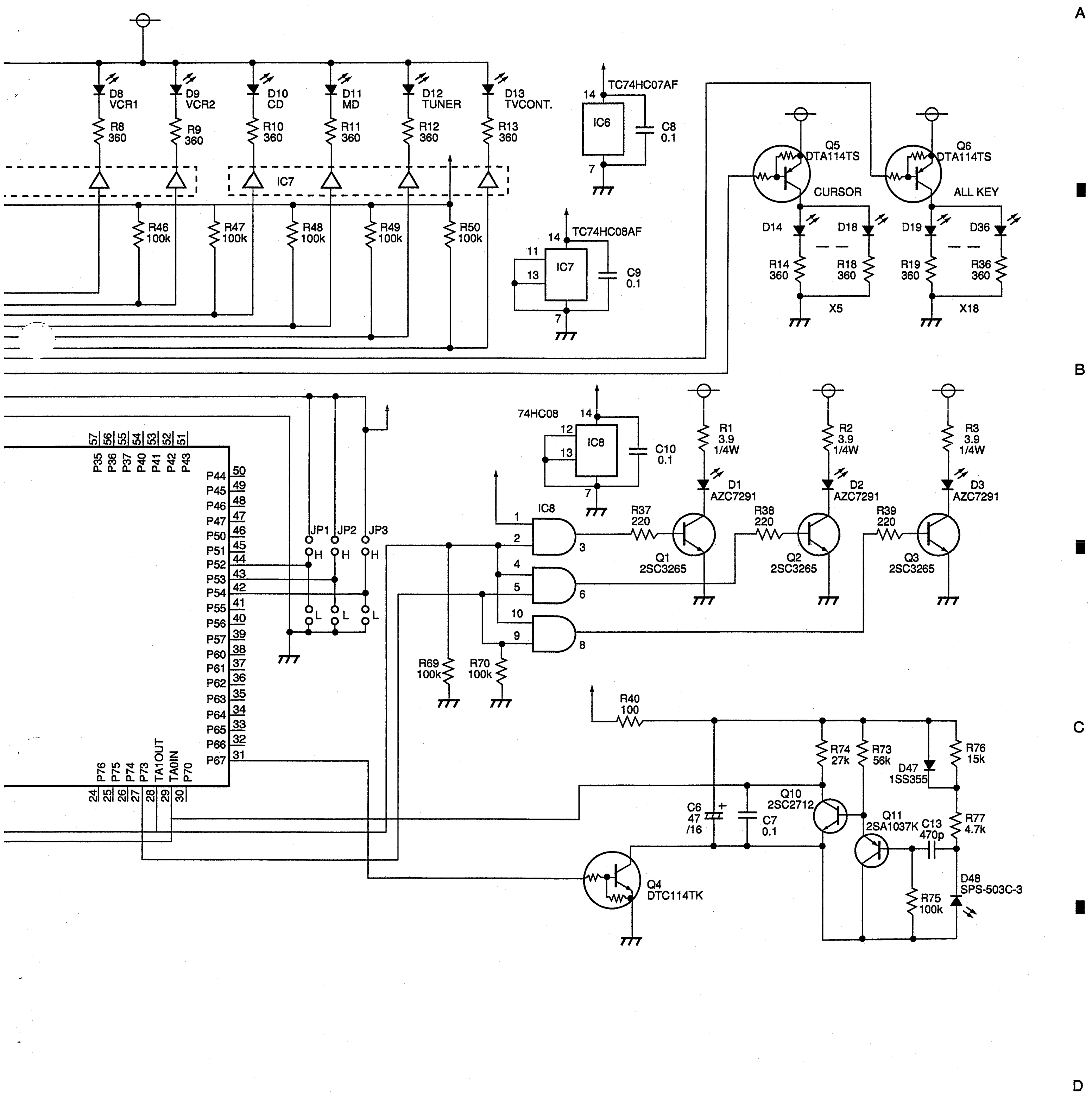

SW1
D48
C11
R76
Q3
R83
D1
R82
R75
R3
D3
R1
R2
D2
Q10
D47
R72
R22
R21
R5
R81
Q1
Q2
R4
R20
R6
R9
IC6
R8
R13
R19
R7
74HC07
R11
IC7
74HC08
R73
IC5 74HC07
R12
C7
C8
R10
R48
R50
R69
R70
R24
R42
R41
R43
R44
R45
R46
R47
R49
IC1
M30622MA
R23
R26
JP1
JP2
JP3
Q6
Q9
Q5
T1
T3
T4
R54
C4
Q8
X1
8MHz
R25
C3
Q4
R52
R51
R58
R59
R60
R61
R62
D45
C9
C10
T5
R53
R23
R63
R64
D41
D37
R68
R28
R29
D42
D38
D39
R40
R30
D43
D44
D40
R56
R55
R65
R57
R66
C2
SMK
L1
IC3
D46
R71
IC2
Q7
C9
C1
R32
R31
R15
R34
R14
R33
R17
RRC4000-75014R 401RRC-201-03P(A)
8C2
R16
R18
R36
R35
BAT
T6 T7
R37
R38

SIDE B

7.3.3 SCHEMATIC DIAGRAM



D4 - D36
AZC7292
D4 M.OPE
D5 SYS OFF
D6 DVD/LD
D7 TV/SAT
R4 360
R5 360
R6 360
R7 360
IC6
R41 100k
R42 100k
R43 100k
R44 100k
R45 100k
R55 100k
R56 100k
R57 100k
R58 100k
R59 100k
R60 100k
R61 100k
R62 100k
T1
T2
R63 100k
R64 100k
R65 100k
R66 100k
D37
D38
D39
D40
D41
D42
D43
D44
D37-D44
1SS355
IC1
AZC7285
P07
P06
P05
P04
P03
P02
P01
P00
P107
P106
P105
P104
P103
P102
P101
AVSS
P100
VREF
AVOO
P97
P10
P11
P12
P13
P14
P15
P16
P17
P20
P21
P22
P23
P24
P25
P26
P27
VSS
P30
VCC
P31
P32
P33
P34
P96
P95
P94
P93
P92
P91
TB0 IN
BYTE
CNVSS
P87
P86
RESET
XOUT
VSS
XIN
VCC
P85/NMI
INT2
INT1
INT0
P81
P80
P77
T4
T3
X1
8MHz
C4
0.1
T5
C12
1
R51
3.3k
Q8
2SC2712
C5
0.1
R54
100k
R53
330k
D45
1SS355
R52
47k
T6
BATTERY
T7
L1
47µH
D46
1SS355
C1
1000/6.3
Q7
AZC7289
R72
100
AZC7286
IC2
3.3V
NC
AZC7287
IC3
1.5V
CMOS
R67
10
T8
C2
47/16
C11
0.1F
Q9 AZC7290
R68
100
IC4
1.8V
CMOS
AZC7288


A
B
C
D
D8
VCR1
D9
VCR2
D10
CD
D11
MD
D12
TUNER
D13
TVCONT.
R8
360
R9
360
R10
360
R11
360
R12
360
R13
360
IC7
R46
100k
R47
100k
R48
100k
R49
100k
R50
100k
TC74HC07AF
14
IC6
7
C8
0.1
TC74HC08AF
14
11
13
IC7
7
C9
0.1
Q5
DTA114TS
CURSOR
Q6
DTA114TS
ALL KEY
D14
D18
D19
D36
R14
360
R18
360
R19
360
R36
360
X5
X18
57 56 55 54 53 52 51
P35 P36 P37 P40 P41 P42 P43
P44 50
P45 49
P46 48
P47 47
P50 46
P51 45
P52 44
P53 43
P54 42
P55 41
P56 40
P57 39
P60 38
P61 37
P62 36
P63 35
P64 34
P65 33
P66 32
P67 31
P76 P75 P74 P73 TA1OUT TA0IN P70
24 25 26 27 28 29 30
JP1
JP2
JP3
H
L
74HC08
14
12
13
IC8
7
C10
0.1
IC8
1
2
3
4
5
6
10
9
8
R69
100k
R70
100k
R1
3.9
1/4W
R2
3.9
1/4W
R3
3.9
1/4W
D1
AZC7291
D2
AZC7291
D3
AZC7291
R37
220
R38
220
R39
220
Q1
2SC3265
Q2
2SC3265
Q3
2SC3265
R40
100
R74
27k
R73
56k
D47
1SS355
R76
15k
C6
47
/16
C7
0.1
Q10
2SC2712
Q11
2SA1037K
C13
470p
R77
4.7k
R75
100k
D48
SPS-503C-3
Q4
DTC114TK

7.3.4 PCB PARTS LIST

NOTES: ●*The* ⚠ *mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56×10^1 → 561 .... RD1/4PU $\boxed{5}\boxed{6}\boxed{1}$ *J*
47k Ω → 47×10^3 → 473 .... RD1/4PU $\boxed{4}\boxed{7}\boxed{3}$ *J*
0.5 Ω → R50 .... RN2H $\boxed{R}\boxed{5}\boxed{0}$ *K*
1 Ω → 1R0 .... RS1P $\boxed{1}\boxed{R}\boxed{0}$ *K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562×10^1 → 5621 .... RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ *F*

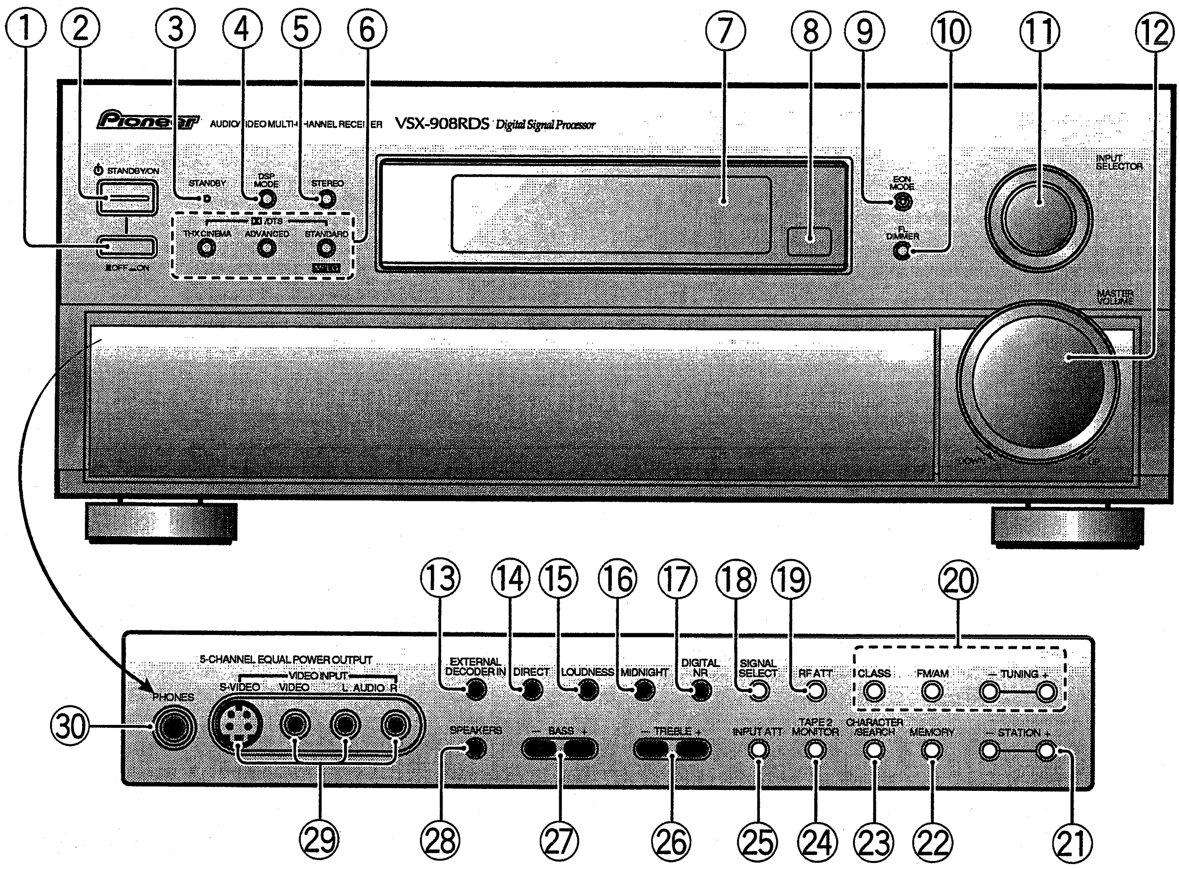
Mark	No.	Description	Part No.
	IC1	U-COM(M30662)	AZC7285
	IC2	VOLTAGE REG. 3.3V	AZC7286
	IC3	VOLTAGE DETECTOR 1.5	AZC7287
	IC4	VOLTAGE DETECTOR 1.8	AZC7288
	IC5, IC6		TC74HC07AF
	IC7		TC74HC08AF
	Q7	FET(2SK1959)	AZC7289
	Q9	FET(2SK2009)	AZC7290
	Q5, Q6		DTA114TS
	Q4		DTC114TK
	Q11		2SA1037K
	Q8, Q10		2SC2712
	Q1–Q3		2SC3265
	D1–D3	INFRARED LED	AZC7291
	D4–D36	ORANGE LED	AZC7292
	D48	PIN PHOTO DIODE	SPS-503C-3
	D37–D47		1SS355

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Front Section

All the controls on the front panel are explained and/or referenced here. To open the front panel push gently on the lower third of the panel.


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
Pioneer
AUDIO/VIDEO MULTI-CHANNEL RECEIVER VSX-908RDS Digital Signal Processor
⏻ STANDBY/ON
■OFF ▁ON
STANDBY
DSP MODE
STEREO
DD/DTS
THX CINEMA
ADVANCED
STANDARD
MPEG
EON MODE
FL DIMMER
INPUT SELECTOR
MASTER VOLUME
DOWN
UP
⑬
⑭
⑮
⑯
⑰
⑱
⑲
⑳
5-CHANNEL EQUAL POWER OUTPUT
VIDEO INPUT
S-VIDEO
VIDEO
L AUDIO R
PHONES
EXTERNAL DECODER IN
DIRECT
LOUDNESS
MIDNIGHT
DIGITAL NR
SIGNAL SELECT
RF ATT
CLASS
FM/AM
— TUNING +
SPEAKERS
— BASS +
— TREBLE +
INPUT ATT
TAPE 2 MONITOR
CHARACTER /SEARCH
MEMORY
— STATION +
㉚
㉙
㉘
㉗
㉖
㉕
㉔
㉓
㉒
㉑

① Main power (■ ON/ ▁ OFF) button

If the button is OFF (▁), the power of the receiver is shut off and the STANDBY/ON button (②) on the receiver or the remote control do not function. Pressing the button again will turn the receiver ON (■) and the receiver enters the standby mode. In the standby mode, you can turn on the receiver using the STANDBY/ON button (②) on the receiver or the remote control.

② ⏻ STANDBY/ON button

Press to switch the receiver ON or into the STANDBY mode.

③ STANDBY indicator

Lights when the receiver is in the STANDBY mode. (Please note that this receiver consumes a small amount of power (1.0 W) during the standby mode.)

④ DSP MODE button

Press repeatedly to select a DSP sound mode. (HALL 1, HALL 2, JAZZ, DANCE, THEATER 1, or THEATER 2). Use these modes to produce surround sound from standard (two channel) stereo sources and create different listening environments.

⑤ STEREO button

Press to select the STEREO sound mode. In this mode, sound comes from the front (left and right) speakers only.

⑥ DD/DTS buttons

THX CINEMA : Press to select the HOME THX CINEMA mode when listening to Dolby Digital, Dolby Pro Logic, DTS, or a variety of other sources.
ADVANCED : Press to select one of the four Advanced Theater modes.
STANDARD (MPEG) : Press repeatedly to select the STANDARD or MPEG mode.

⑦ Display

⑧ Remote sensor

Point the remote control toward the remote sensor to operate the receiver.

⑨ EON MODE button/indicator

Press to select the EON mode in the FM mode. The indicator lights when the EON mode is selected.

⑩ FL DIMMER button

Use to adjust the brightness of the main display.

⑪ INPUT SELECTOR dial

Turn to select a source component. The source indicators on the display shows the current component:

DVD/LD : DVD player or Laser Disc player.
TV/SAT : TV tuner or satellite tuner.
CD : Compact disc player.
MD/TAPE 1 : Tape deck or Mini disc recorder connected to MD/TAPE 1/CD-R inputs/outputs.
TUNER : The built-in tuner.
PHONO : Turntable.
VIDEO : Video camera (etc.) connected to the VIDEO INPUT on the front panel.
VCR 1 : Video cassette recorder connected to VCR 1 inputs.
VCR 2 : Video cassette recorder or other component connected to VCR 2 inputs.

⑫ MASTER VOLUME

Adjusts the overall receiver volume.

⑬ EXTERNAL DECODER IN button

Use to hook up an external component that can decode other types of signals and input them into the receiver.

⑭ DIRECT button

Switches direct playback on or off. Use to bypass the tone controls and channel level for the most accurate reproduction of a program source. It will automatically put the receiver in the STEREO mode for that function.

⑮ LOUDNESS button

Switches the LOUDNESS mode on or off.

⑯ MIDNIGHT button

Switches the MIDNIGHT listening mode on or off.

⑰ DIGITAL NR button

Switches the DIGITAL NR on or off (STEREO mode only).

⑱ SIGNAL SELECT button

Use to select the signal from the digital components. Press SIGNAL SELECT repeatedly to select one of the following:

ANALOG : To select an analog signal.
DIGITAL : To select an optical or coaxial digital signal.
AC-3 RF: To select an AC-3 RF signal.
AUTO: This is the default. If there are both analog and digital input signals, the receiver automatically selects the best possible signal.

⑲ RF ATT button

Press to turn the RF attenuator on when receiving strong FM signals (nearby stations) to reduce sound distortion. Normally, set the RF attenuator to off. This button does not affect AM reception.

⑳ Tuner control buttons

CLASS : Press repeatedly to switch the preset station classes.
FM/AM : Press to select the AM or FM band.
TUNING –/+ : Use to manually tune into radio stations.

㉑ STATION –/+ buttons

Use to choose programmed radio stations.

㉒ MEMORY button

Press to start the memorization of a preset station.

㉓ CHARACTER/SEARCH button

Press to select the character input mode, or initiate an RDS PTY search.

㉔ TAPE 2 MONITOR button

Selects the tape deck (MD recorder, etc.) connected to the TAPE 2 MOINTOR inputs/outputs. Allows monitoring of a recording as it is being made.

㉕ INPUT ATT button

Use to lower the input level of an analog signal that is too powerful, thus causing the receiver to distort (the OVER indicator will light furiously).

㉖ TREBLE (–/+) buttons

Use to adjust the high frequencies.

㉗ BASS (–/+) buttons

Use to adjust low frequencies.

㉘ SPEAKERS (A/B) buttons

A is the primary setting. It plays all speakers hooked up to the A system. A and B setting only plays the front speakers of both the A and B systems and the sub-woofer. Multi channel sources will be down-mixed to these speakers so no sound will be lost. B setting only plays the front speakers connected to the B system and Multi channel sources will be down-mixed to these two speakers.

→ A → B → A+B → OFF

㉙ VIDEO INPUT jacks

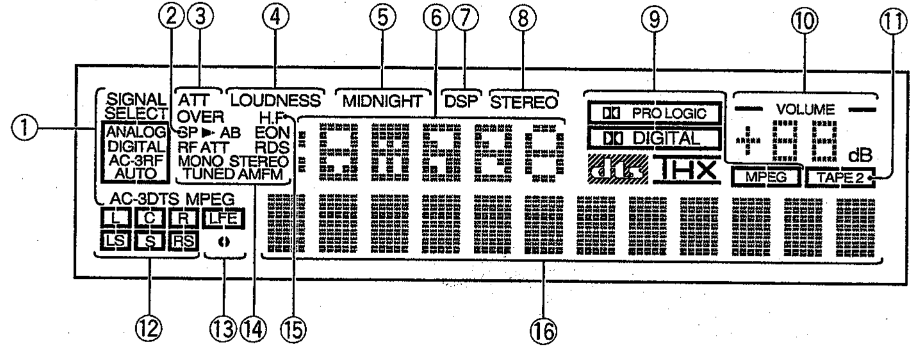
S-VIDEO : Video input for connecting a video camera (etc.), that has an S-Video out.
VIDEO / AUDIO (L/R) : Video input for connecting a video camera, etc. that has standard video/audio outputs.

㉚ PHONES jack

Connect headphones for private listening (no sound will be heard through the speakers).

■ Display

All the display information is explained here.



① SIGNAL SELECT indicators

Light to indicate the type of input signal assigned for the current component (see "Front Panel", ⑱, SIGNAL SELECT).
ANALOG : Lights when an analog signal is selected.
DIGITAL : Lights when a digital audio signal is selected (DVD/LD, CD, MD/TAPE1, TV/SAT, VCR 1, VCR 2).
AC-3RF: Lights when an AC-3 RF signal is selected (DVD/LD, TV/SAT, VCR 1, VCR 2).
AUTO: Lights when the receiver is set to select the input signal automatically (DVD/LD, CD, MD/TAPE 1, TV/SAT, VCR 1, VCR 2).
AC-3 : Lights when a source with Dolby Digital signals is played.
DTS : Lights when a source with DTS audio signals is played.
MPEG: Blinks when the MPEG mode is selected, and lights when a source with MPEG audio signals is played.

② Speaker indicators

Light to indicate the current speaker system (see "Front Panel", ㉘, SPEAKERS (A/B)).
SP ▷ A : Lights when speaker system A is selected.
SP ▷ B : Lights when speaker system B is selected.
SP ▷ AB : Lights when speaker systems A and B are both selected.

③ Analog level indicators

OVER : If "ANALOG" is selected in SIGNAL SELECT, this indicator lights to show that an excessively strong signal is being processed. When this occurs, press INPUT ATT on the front panel to attenuate (lower) the signal. Also, when "DIGITAL" is selected in SIGNAL SELECT, this indicator lights to show that a source containing an excessive amount of information is being processed.
ATT : Lights when INPUT ATT is used to reduce the level of the input signal (available in ANALOG mode only).

④ LOUDNESS indicator

Lights when the LOUDNESS mode is on.

⑤ MIDNIGHT indicator

Lights when the MIDNIGHT listening mode is on.

⑥ Radio Frequency/Source indicator

Displays the source or the frequency of the current radio station.

⑦ DSP indicator

Lights when a DSP or Advanced Theater mode is selected.

⑧ STEREO indicator

Lights when a Stereo mode is selected.

⑨ DD Surround/dts (MPEG) mode indcators

DD DIGITAL : When the DD Surround/dts mode on the receiver is on, this indicator lights to indicate playback of a Dolby Digital signal. However, DD PRO LOGIC lights during 2 channel playback of Dolby Digital.
DD PRO LOGIC : When the DD Surround/dts mode on the receiver is on, this indicator lights during 2 channel playback. The indicator does not light when both the A + B speaker systems, just the B speaker system, or the headphones are selected for playback.
dts : Lights when DTS signals are input.
THX: Lights when the HOME THX CINEMA mode is selected.
MPEG: Lights when the MPEG mode is selected. (DD Surround/dts (MPEG) mode is ON)

⑩ MASTER VOLUME indicator

Displays current level of master volume.

⑪ TAPE 2 indicator

Lights when the TAPE 2 monitor is on.

⑫ Program format indicator

When a Dolby Digital or DTS signal is input, the following indicators light to show the channels being played back.
L : Left front*1*2, **C :** Center*1, **R :** Right front*1*2,
LS : Left surround*1, **S :** Surround (mono)*2,
RS : Right surround*1
*1: Indicates 5.1ch Dolby Digital playback.
*2: Indicates Dolby Pro Logic playback.

⑬ LFE indicator

LFE (Low Frequency Effects) indicator lights to indicate that the program source contains an LFE channel. The indicator under the LFE lights during actual playback of the LFE signals (LFE signals are not present in all parts of the soundtrack).

⑭ Tuner/ FM/AM indicators

MONO : Lights when the tuner is set to receive FM broadcasts with the MONO mode selected.
STEREO : Lights when a FM stereo broadcast is received in the auto stereo mode.
TUNED : Lights when a broadcast is received.
AM/FM : Light to indicate the current band (FM or AM).
EON: Lights when an RDS stations transmitting the EON data service is being received.
RF ATT: Lights when the RF attenuator is on.
RDS: Lights when RDS broadcast is being received.

⑮ H.P (headphones)

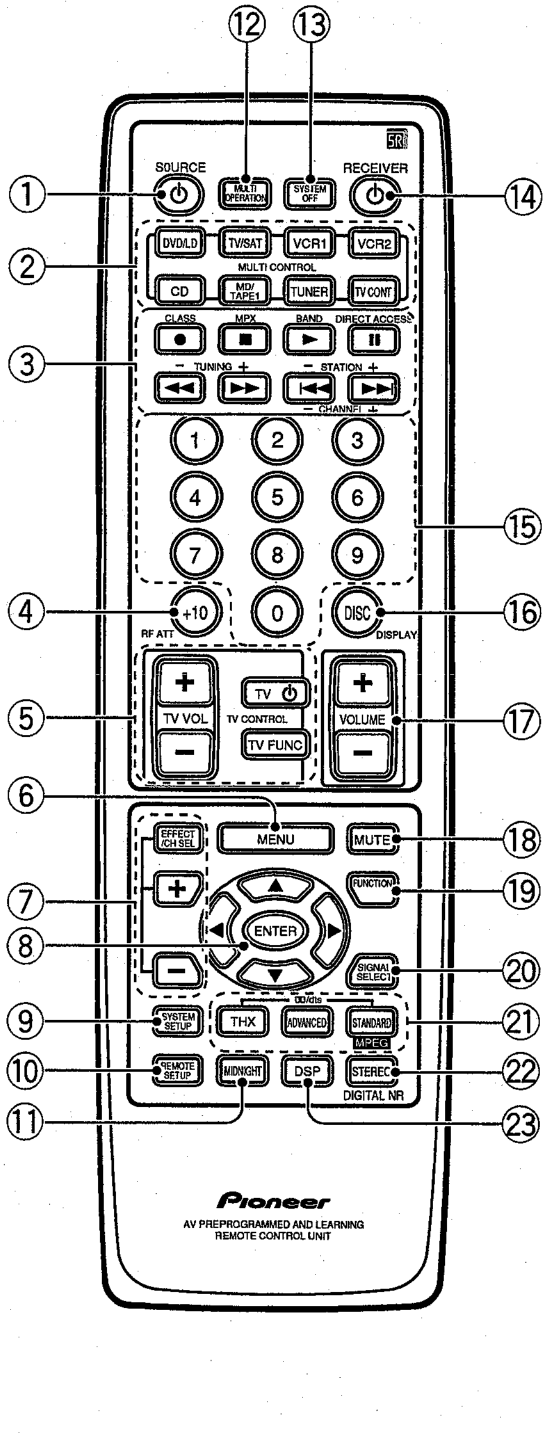
Lights when headphones are connected to the PHONES jack (speakers A and B turn off automatically).

⑯ Character display

Displays sound modes, general information, etc.

■ Remote Control Unit

These pages describe the buttons on the remote control used to operate the receiver.


⑫
⑬
SOURCE
RECEIVER
MULTI OPERATION
SYSTEM OFF
①
⑭
DVD/LD
TV/SAT
VCR1
VCR2
MULTI CONTROL
CD
MD/ TAPE1
TUNER
TV CONT
②
CLASS
MPX
BAND
DIRECT ACCESS
③
– TUNING +
– STATION +
– CHANNEL +
1
2
3
4
5
6
7
8
9
⑮
+10
0
DISC
RF ATT
DISPLAY
④
⑯
+
TV VOL
–
TV
TV CONTROL
TV FUNC
+
VOLUME
–
⑤
⑰
⑥
EFFECT /CH SEL
MENU
MUTE
⑱
+
FUNCTION
⑲
⑦
ENTER
⑧
–
SIGNAL SELECT
⑳
DD/dts
SYSTEM SETUP
THX
ADVANCED
STANDARD
MPEG
⑨
㉑
REMOTE SETUP
MIDNIGHT
DSP
STEREO
DIGITAL NR
⑩
㉒
⑪
㉓
Pioneer
AV PREPROGRAMMED AND LEARNING REMOTE CONTROL UNIT

① SOURCE ⏻ button

Use to turn on the power of your other components after you have recalled or taught the signals to this remote control.

② MULTI CONTROL buttons

Use these buttons to select a source and the corresponding remote operation mode.
For example, pressing the TUNER button selects the built-in tuner and sets the remote control in the tuner operation mode.

③ Component control buttons

[Tuner control]
CLASS: Press repeatedly to switch the preset station classes.
MPX: Press to switch between auto stereo and MONO reception of FM broadcasts.
BAND: Press to select AM or FM band.
DIRECT ACCESS: Press to activate the direct access tuning mode.
TUNING +/–: Use to manually tune into radio stations.
STATION +/–: Use to choose programmed radio stations.

④ RF ATT button

Press to turn the RF attenuator on when receiving strong FM signals (nearby stations) to reduce sound distortion. Normally, set the RF attenuator to off. This button does not affect AM reception.

⑤ TV CONTROL buttons

The following buttons are used to control the TV only and can be used no matter what function the remote control is set to.
TV ⏻: Press to turn the power of the TV on/off.
TV FUNC : Press to select the TV for remote control operation.
TV VOL +/– : Press to control the volume of the TV.

⑥ MENU button

Use to display various menus on the TV screen.

⑦ EFFECT/CH SEL +/– buttons

EFFECT : Use these buttons to increase or decrease the amount of effect applied in a DSP or Advanced Theater mode. When the amount of effect is increased in a DSP/ Advanced Theater mode, the characteristics of that mode become stronger and more noticeable. The scale ranges from 10-90 with 70 as the default setting. First turn on the DSP or ADVANCED Theater mode (by pressing the ㉑ DSP or Advanced button until you get the mode) and then increase or decrease the amount of effect.
CH SEL : You may want to adjust the channels when listening to some sound sources. Use this button to select the channel you want to adjust.
+/– : Use these buttons to select the amount of effect in a sound mode or to adjust the channel level when making surround sound settings.

⑧ ▲/▼/◄/►/ENTER buttons

Use to operate the on-screen menu on your TV screen and enter commands when setting up surround sound, speakers levels & settings, and other setup features. Specific use of these buttons is described in conjunction with the operations they perform. For more information see each section.

⑨ SYSTEM SETUP button

Use to set up the speaker and sound systems.

⑩ REMOTE SETUP button.

Use to customize the remote control functions and the remote control itself.

Press the SIGNAL SELECT and REMOTE SETUP buttons simultaneously to switch from the SIGNAL SELECT operation to EXTERNAL DECODER operation. Then press the button to get the EXTERNAL DECODER function. To get back to the SIGNAL SELECT control, press the REMOTE SETUP button and the SIGNAL SELECT button simultaneously once again.

⑪ MIDNIGHT button

Switches the MIDNIGHT listening mode on or off.

⑫ MULTI OPERATION button

Use this button to start the MULTI OPERATION mode.

⑬ SYSTEM OFF button

This button turns off components in two ways. First, when pressed, it will turn off all PIONEER components. Secondly, any component that has programmed into the SYSTEM OFF settings will also be turned off.

For example : If you programmed power-on for your TV and VCR, pressing the SYSTEM OFF button will turn off these components even if they are not PIONEER products.

⑭ RECEIVER ⏻ button

Press to turn power of the receiver on or to STANDBY (off).

⑮ Number buttons

These buttons can perform a variety of different functions depending on the remote operation mode. They are most useful for CD player and tuner operations.

⑯ DISC/DISPLAY button

Press to switch the RDS data while listening to an FM station.
Each press changes the display mode in the order of RT, PS, PTY, and frequency.
This button can perform a variety of different functions depending on the remote operation mode.

⑰ VOLUME button

Use to raise or lower the volume of the receiver.

⑱ MUTE button

Press to mute or restore the volume.

⑲ FUNCTION button

Press to select a source. The button will cycle through all the possible sources.

⑳ SIGNAL SELECT button

Press SIGNAL SELECT repeatedly to select one of the following:
ANALOG : To select an analog signal.
DIGITAL : To select a digital signal (DVD/LD, TV/SAT, CD, MD/TAPE 1, VCR 1, VCR 2).
AC-3 RF: To select an AC-3 RF signal (DVD/LD, TV/SAT, VCR 1, VCR 2).
AUTO: This is the default. If there are both analog and digital input signals, the receiver automatically selects the best possible signal. Press the SIGNAL SELECT and REMOTE SETUP buttons simultaneously to switch from the SIGNAL SELECT operation to EXTERNAL DECODER operation. Then press the button to get the EXTERNAL DECODER function. To get back to the SIGNAL SELECT control, press the REMOTE SETUP button and the SIGNAL SELECT button simultaneously once again.

㉑ DD/dts buttons

Press these buttons to put the receiver in the selected sound mode.

㉒ STEREO/DIGITAL NR button

STEREO : Press this button to put the receiver into the stereo mode when it's in a different sound mode. For more information on the sound modes.
DIGITAL NR : Switches the DIGITAL NR on or off .

㉓ DSP button

Press repeatedly to select a DSP sound mode.

■ Audio Components Connections

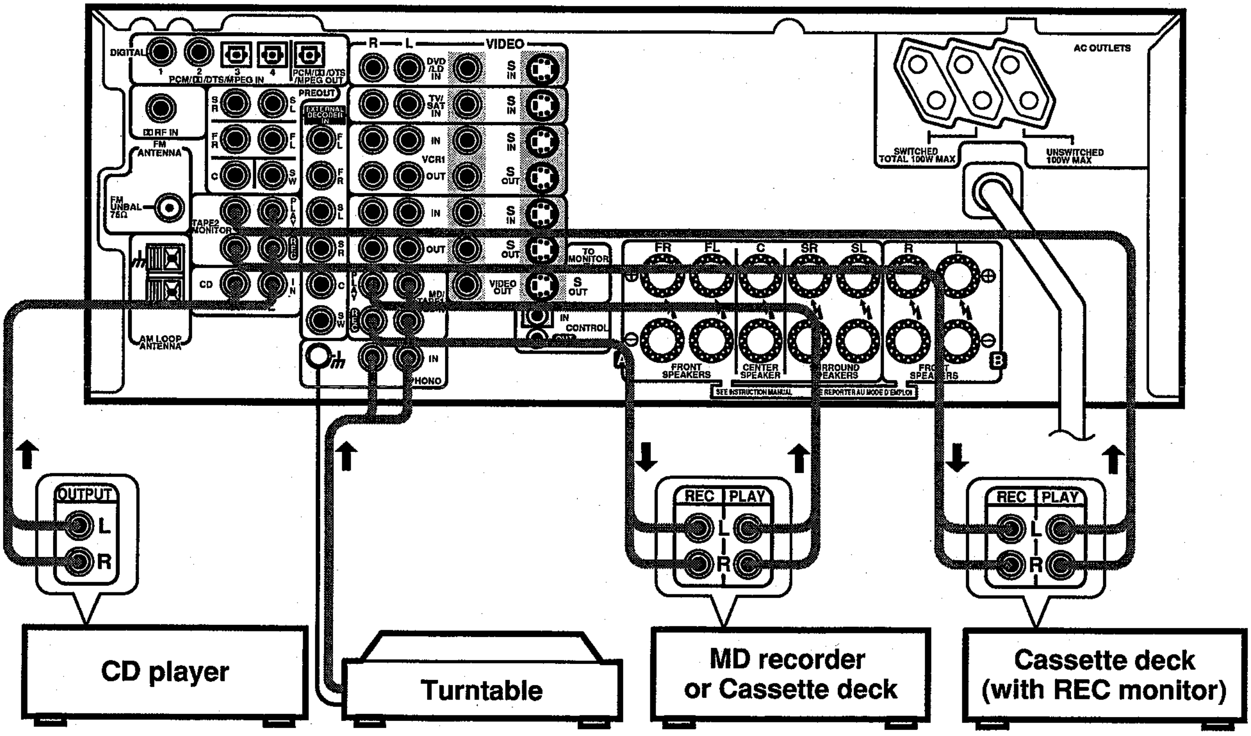
Before making or changing the connections, switch off the power and disconnect the power cord from the AC outlet.

To begin set up connect your audio components to the jacks as shown below. These are all analog connections and your analog audio components (turntable, cassette deck) use these jacks. Remember that for components you want to record with you need to hook up four plugs (a set of stereo ins and a set of stereo outs), but for components that only play (like a turntable) you only need to hook up one set of stereo plugs (two plugs). To use DTS surround sound features you must hook up your digital components to the digital inputs but it is also a good idea to hook up your digital components to analog audio jacks. If you want to record to/from digital components (like an MD) to/from analog components you must hook up your digital equipment with these analog connections.

Memo

The arrows indicate the direction of the audio signal.

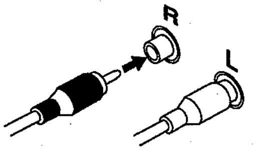
The illustration is not applicable to the UK model.


DIGITAL
PCM/DD/DTS/MPEG IN
PCM/DD/DTS/MPEG OUT
DD RF IN
FM ANTENNA
FM UNBAL 75Ω
AM LOOP ANTENNA
PREOUT
EXTERNAL DECODER IN
TAPE2 MONITOR
CD
PHONO
VIDEO
DVD/LD IN
TV/SAT IN
VCR1
MD/TAPE1
TO MONITOR
CONTROL
FR
FL
C
SR
SL
R
L
FRONT SPEAKERS
CENTER SPEAKER
SURROUND SPEAKERS
FRONT SPEAKERS
A
B
AC OUTLETS
SWITCHED TOTAL 100W MAX
UNSWITCHED 100W MAX
OUTPUT
L
R
REC
PLAY
L
R
REC
PLAY
L
R
CD player
Turntable
MD recorder or Cassette deck
Cassette deck (with REC monitor)

If your turntable has a ground wire, connect it to the ⏚(signal ground) terminal.

■ Audio cords

Use audio cords (not supplied) to connect the audio components.



Connect red plugs to R (right) and white plugs to L (left).
Be sure to insert completely.

Cassette deck placement

Depending on where the cassette deck is placed, noise may occur during playback of your cassette deck, which is caused by leakage flux from the transformer in the receiver. If you experience noise, move the cassette deck farther away from the receiver.

8.2 SPECIFICATIONS

Amplifier Section

Continuous Power Output (STEREO MODE)	
FRONT	110 W + 110 W (DIN 1 kHz, THD 1 %, 8Ω)
Continuous Power Output (SURROUND MODE)	
FRONT	110 W + 110 W (DIN 1 kHz, THD 1 %, 8Ω)
CENTER	110 W (DIN 1 kHz, THD 1 %, 8Ω)
SURROUND	110 W + 110 W (DIN 1 kHz, THD 1 %, 8Ω)
Rated Power Output	100 W + 100 W (20-20 kHz, THD 0.09 %, 8Ω)

- Above specifications are applicable when the power supply is 230V.

Input (Sensitivity/Impedance)	
PHONO MM	4.7 mV/47 kΩ
VCR 1, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, MD/TAPE 1/CD-R, TAPE 2	335 mV/47 kΩ
Frequency Response	
PHONO MM	80 dB
VCR 1, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, MD/TAPE 1/CD-R, TAPE 2	5 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)	
VCR 1 REC, VCR 2 REC, MD/TAPE 1/CD-R REC, TAPE 2 REC	335 mV/2.2 kΩ
Tone Control	
BASS	± 6 dB (100 Hz)
TREBLE	± 6 dB (10 kHz)
LOUDNESS	+3 dB (100 Hz/10 kHz)
Signal-to-Noise Ratio (IHF, short circuited, A network)	
PHONO MM	80 dB
VCR 1, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, MD/TAPE 1/CD-R, TAPE 2	101 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]	
PHONO MM	80 dB
VCR 1, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, MD/TAPE 1/CD-R, TAPE 2	83 dB

VIDEO Section

Input (Sensitivity/Impedance)	
VCR 1, VCR 2, DVD/LD, TV/SAT, VIDEO	1 Vp-p/75 Ω
Output (Level/Impedance)	
VCR 1, VCR 2, MONITOR	1 Vp-p/75 Ω
Frequency Response	
VCR 1, VCR 2, MONITOR	5 Hz to 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio	65 dB

FM Tuner Section

Frequency Range	87.5 MHz to 108 MHz
Usable Sensitivity	Mono: 15.2 dBf, IHF (1.6 μV/75 Ω)
50 dB Quieting Sensitivity	Mono: 20.2 dBf Stereo: 41.2 dBf
Sensitivity (DIN)	Mono: 1.1 μV (S/N 26 dB) Stereo: 50 μV (S/N 46 dB)
Signal-to-Noise Ratio	Mono: 76 dB (at 85 dBf) Stereo: 72 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN)	Mono: 62 dB Stereo: 58 dB
Distortion	Stereo: 0.6 % (1 kHz)
Alternate Channel Selectivity	70 dB (400 kHz)
Stereo Separation	40 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz (± 1dB)
Antenna Input	75 Ω unbalanced

AM Tuner Section

Frequency Range	531 kHz to 1.602 kHz
Sensitivity (IHF, Loop antenna)	350 μV/m
Selectivity	30 dB
Signal-to-Noise Ratio	50 dB
Antenna	Loop antenna

Miscellaneous

Power Requirements	
UK model	AC 230 V, 50/60 Hz
European model	AC 220 - 230 V, 50/60 Hz
Power Consumption	400 W
Power Consumption in Standby mode	1.0 W
AC Outlets (except for the UK model)	
SWITCHED (×2)	Total 100 W MAX.
UNSWITCHED	100 W MAX.
Dimensions	420 (W) × 173 (H) × 470 (D) mm
Weight (without package)	14.9 kg

Furnished Parts

FM Antenna	1
AM Loop Antenna	1
Dry Cell Batteries (SIZE "AA" (IEC LR6))	2
Remote Control Unit	1
Operating Instructions	1

NOTE:
Specifications and the design are subject to possible modifications without notice, due to improvements.

The MPEG logo is a registered trademark of Royal Philips Electronics.

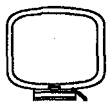
"DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc.
Manufactured under licence from Digital Theater Systems, Inc.

Manufactured under license from Dolby Laboratories. "Dolby", "AC-3", "Pro Logic", and double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. © 1992 - 1997 Dolby Laboratories. All rights reserved.

Manufactured under license from Lucasfilm Ltd. Lucasfilm and THX are trademarks of Lucasfilm Ltd.

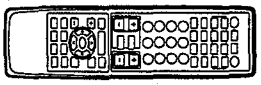
Accessories

FM wire antenna (ADH7010)



AM loop antenna (ATB7009)

"AA" IEC LR6 batteries x 2



Remote control unit
(CU-VSX162 : AXD7214)
VSX-908RDS
(CU-VSX165 : AXD7236)
VSX-908RDS-G

Printed by: Schaltungsdienst Lange, Berlin (GERMANY)